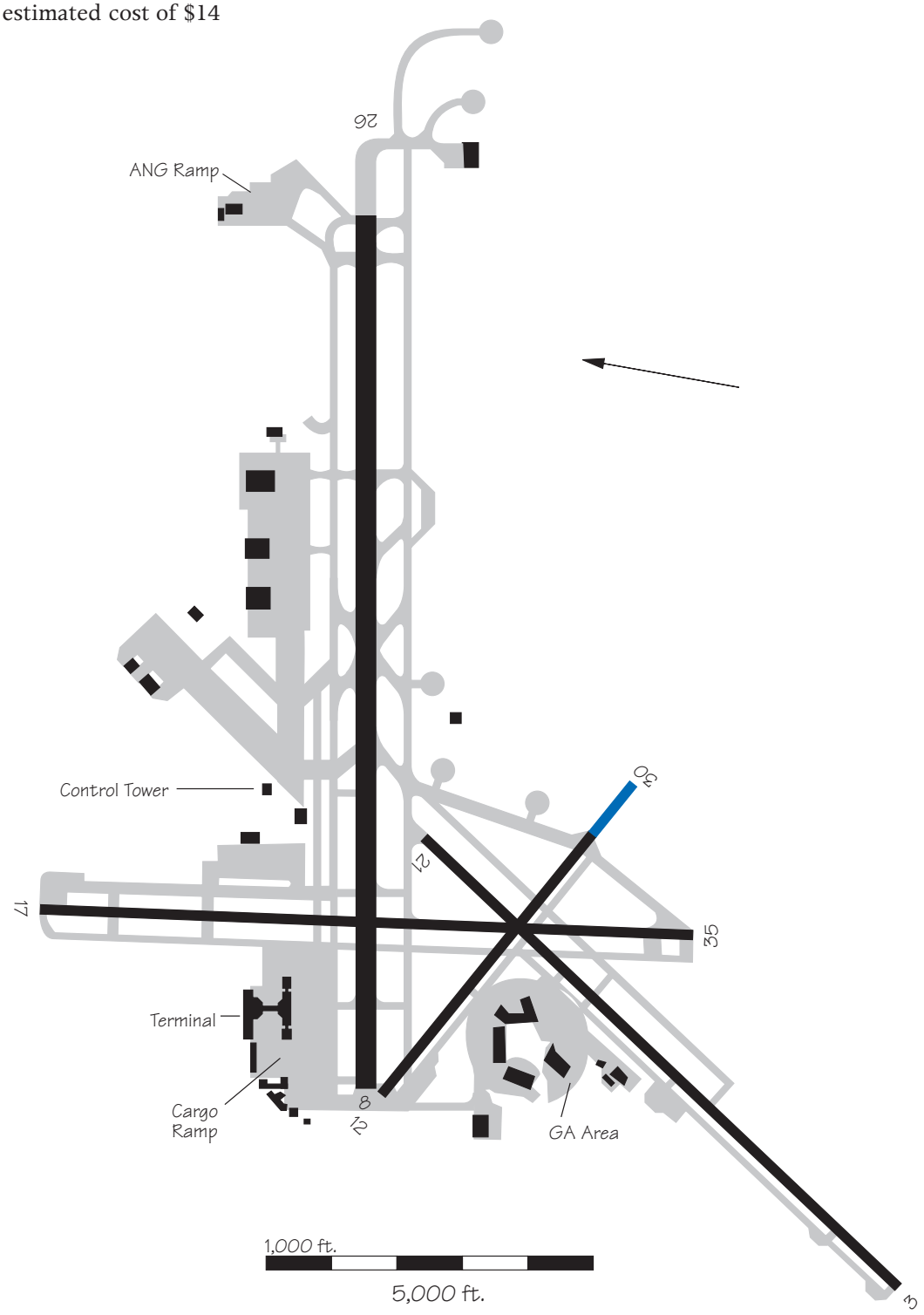
APPENDIX B: TOP 100 AIRPORTS

This appendix contains current airport diagrams for the top 100 airports.[1] For those airports that are considering or have plans for the construction of new runways or extensions to existing runways, the diagrams show the proposed runway and runway extension projects indicated in blue. These diagrams are for illustration only, and should not be used in any way for airport planning purposes. Accompanying the diagrams is a brief narrative of construction projects being planned or considered.

1. Based on 1997 passenger enplanements (see Appendix A, Table A-1).

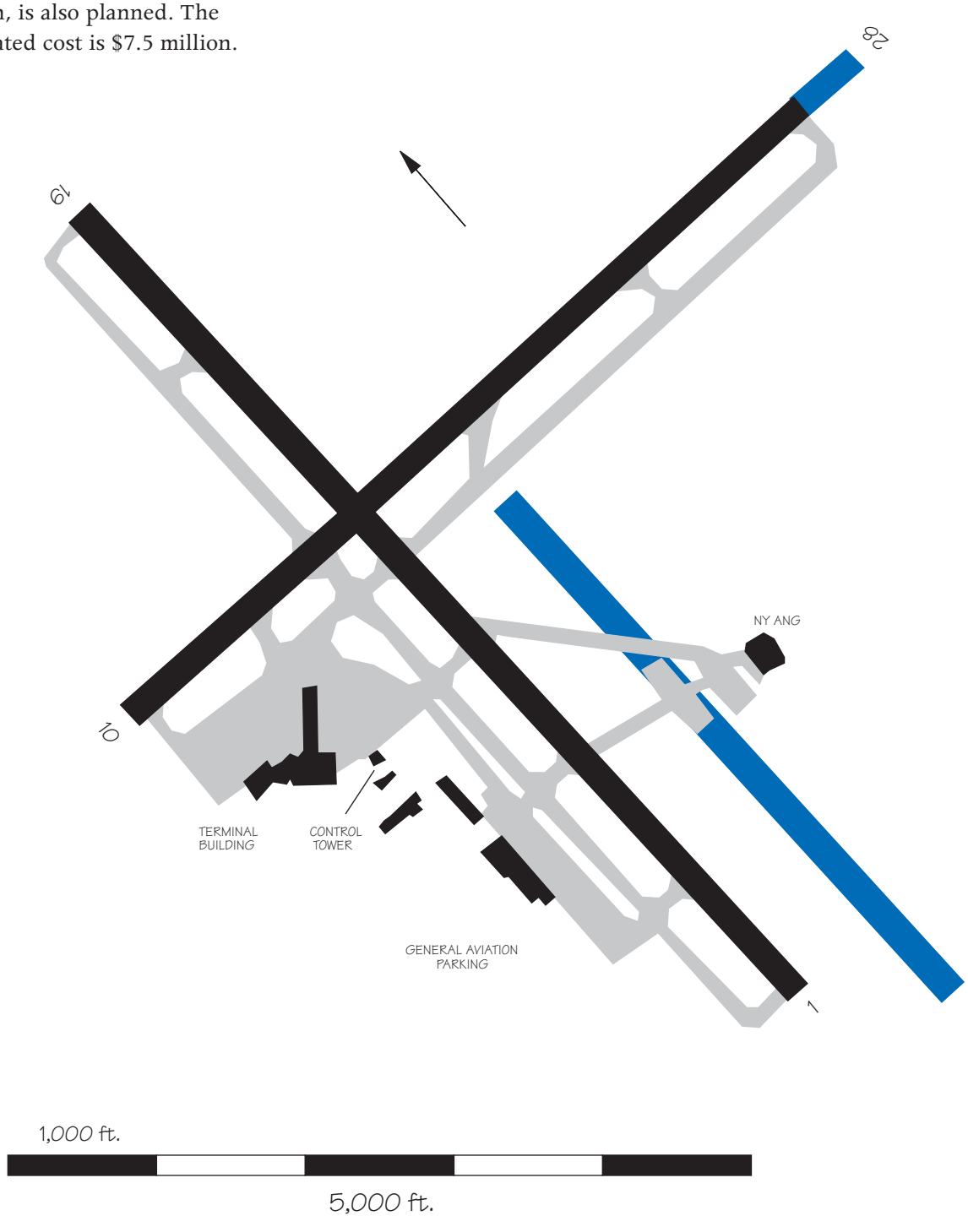
ABQ — Albuquerque International Airport

A 1,000 ft. extension to Runway 12/30 is proposed. It is expected to be operational by 2000, at an estimated cost of $14 million.

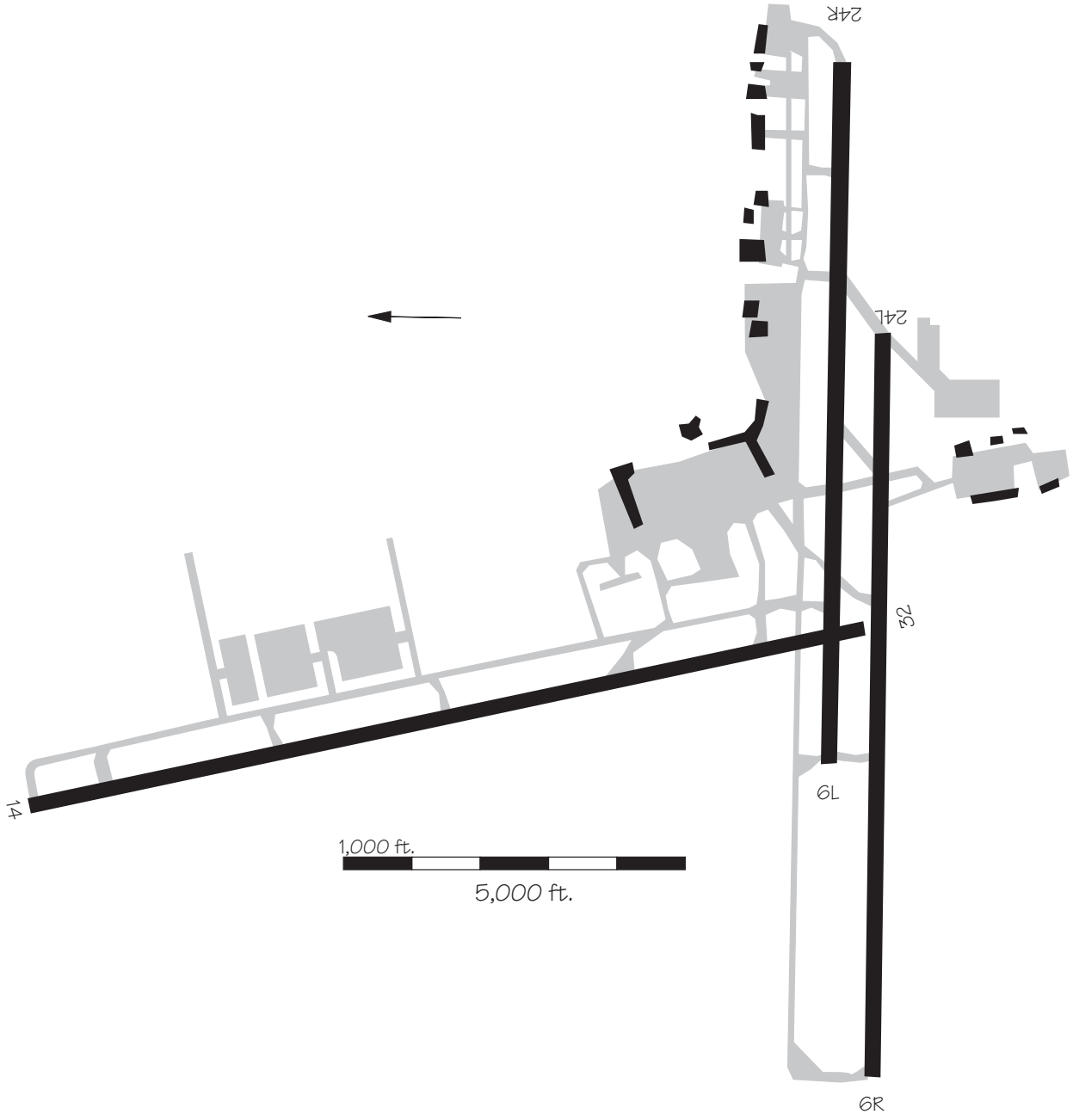


ALB — Albany County Airport

Construction of an extension to Runway 10/28 is planned. The estimated cost of construction is $5.8 million. A new parallel Runway 1R/19L, 4,850 ft. in length, is also planned. The estimated cost is $7.5 million.

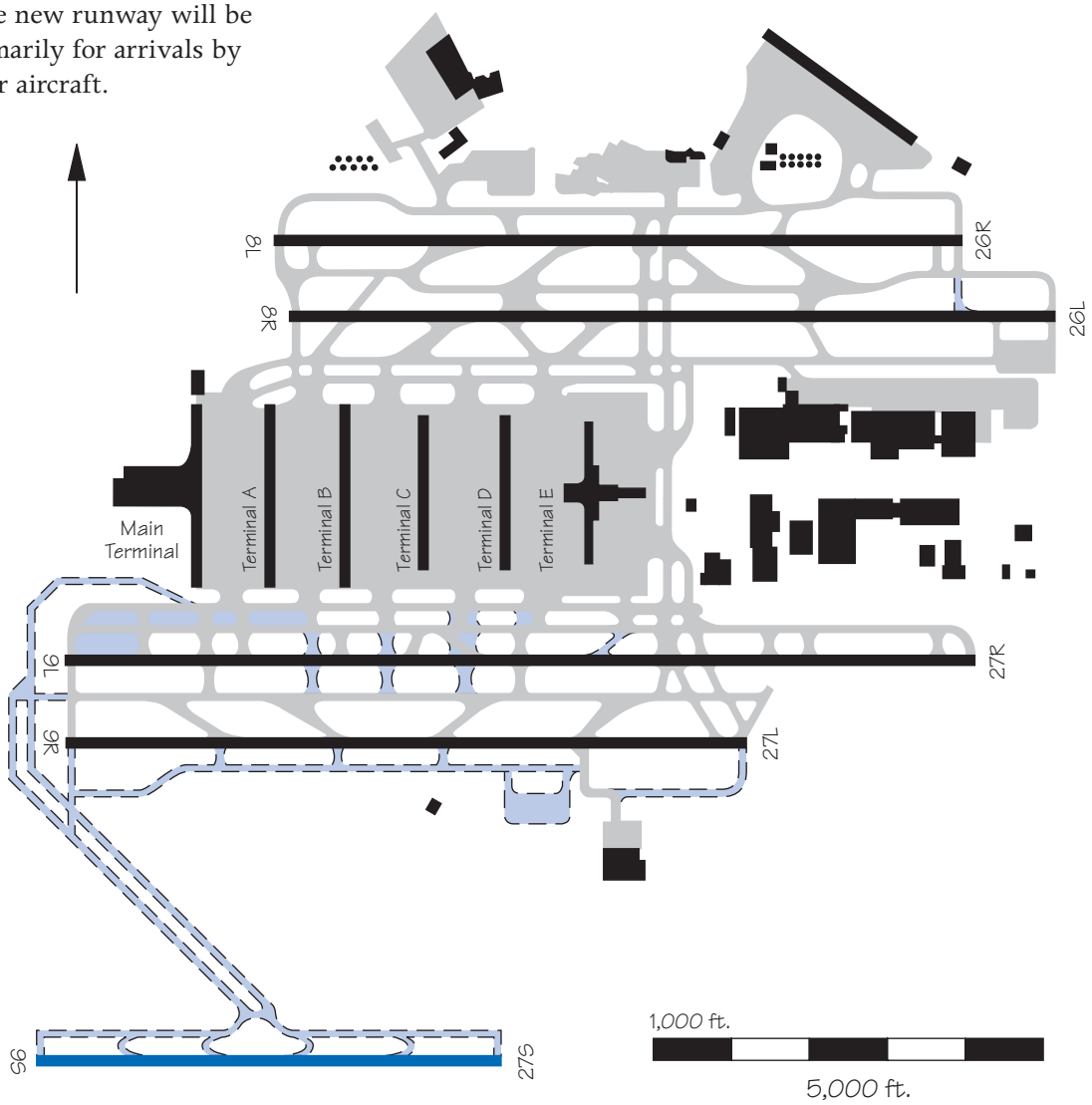


ANC — Anchorage International Airport



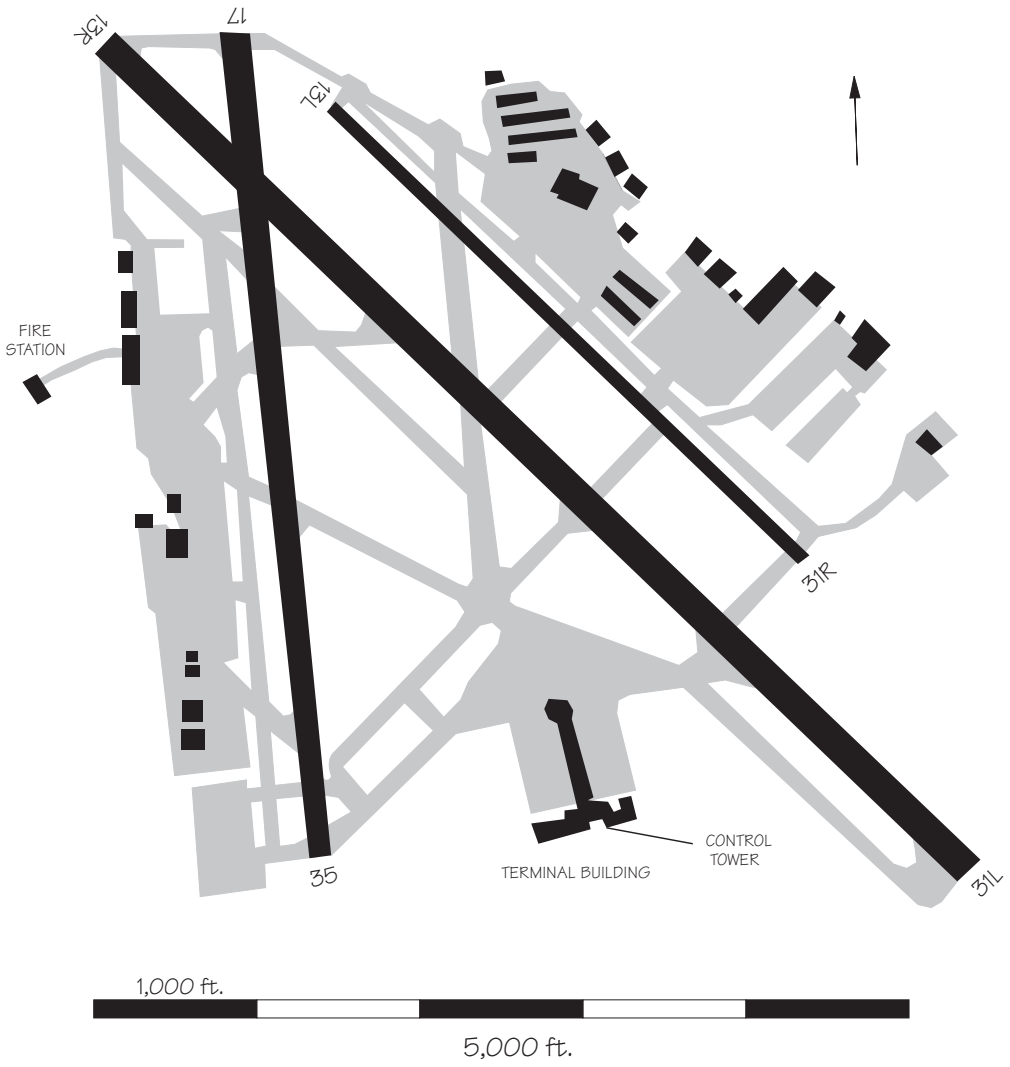
ATL — Hartsfield Atlanta International Airport

A fifth parallel commuter runway, 6,000 ft. long and approximately 4,200 ft. south of Runway 9R/27L, is under design. Land acquisition is ongoing. The runway will permit triple independent IFR approaches using the PRM. The total estimated cost is $440 million. Construction is expected to begin in early 1999. The estimated operational date is early 2002. The new runway will be used primarily for arrivals by commuter aircraft.

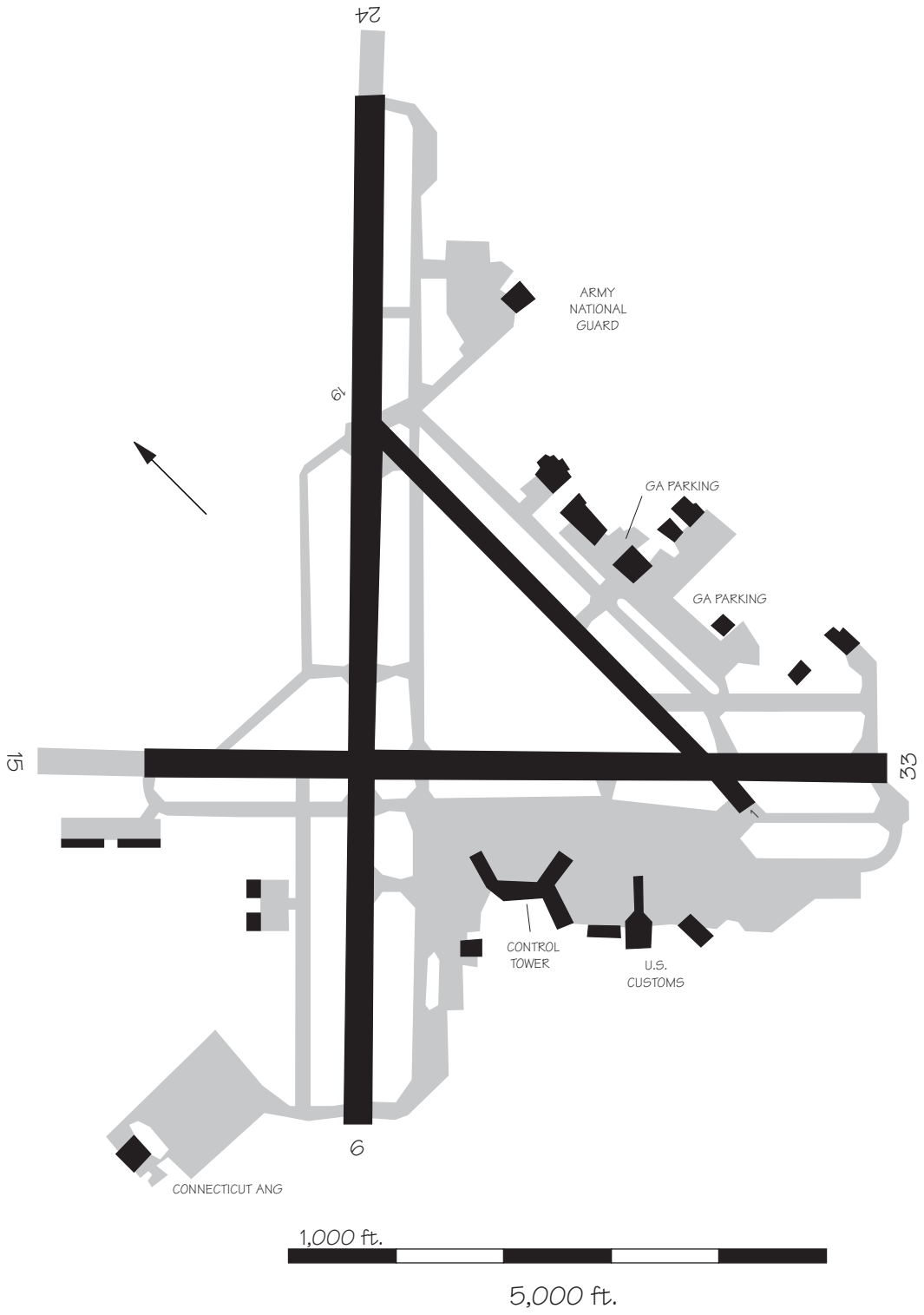


AUS — Austin Robert Mueller Municipal Airport

The airport is being replaced by the redeveloped Bergstrom Air Force Base (BSM). See Austin-Bergstrom International Airport (BSM) for details.

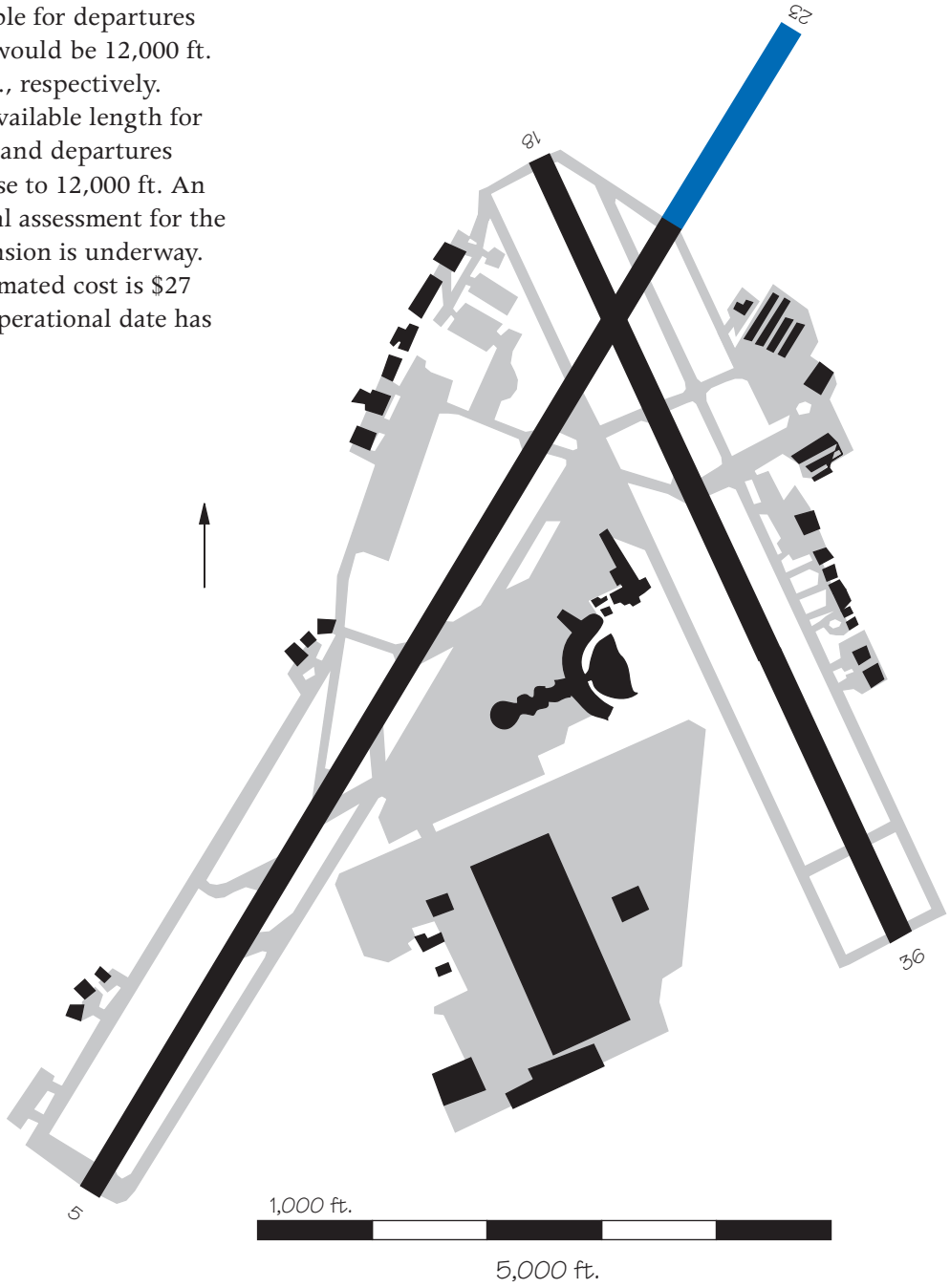


BDL — Bradley International Airport



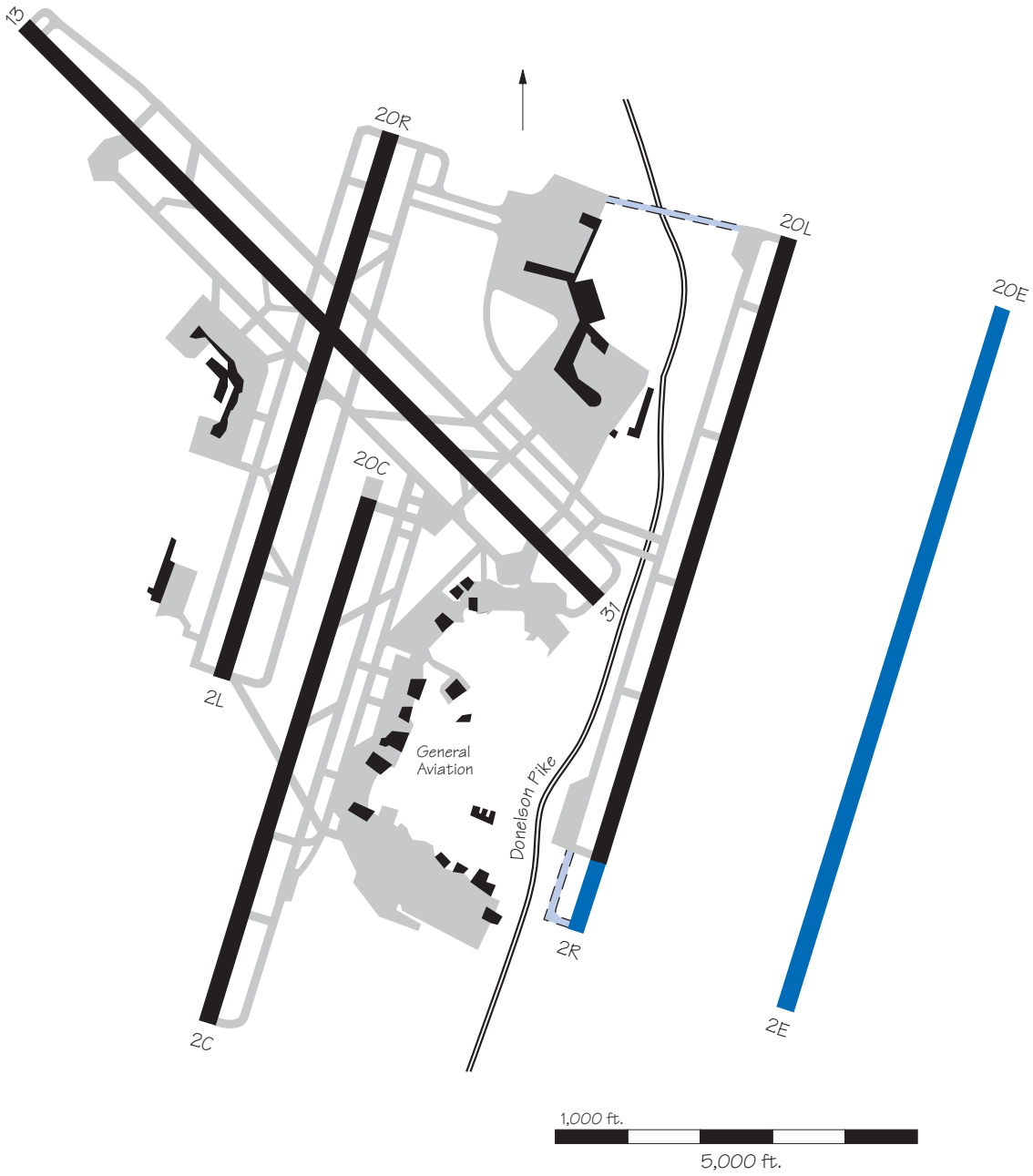
BHM — Birmingham Airport

A 2,000 ft. extension of Runway 5/23 is currently proposed in the Airport's Master Plan. As proposed, the Runway 23 threshold would be displaced 2,000 ft.. Therefore, Runway 23's length available for departures and arrivals would be 12,000 ft. and 10,000 ft., respectively. Runway 5's available length for both arrivals and departures would increase to 12,000 ft. An environmental assessment for the runway extension is underway. The total estimated cost is $27 million. No operational date has been set.



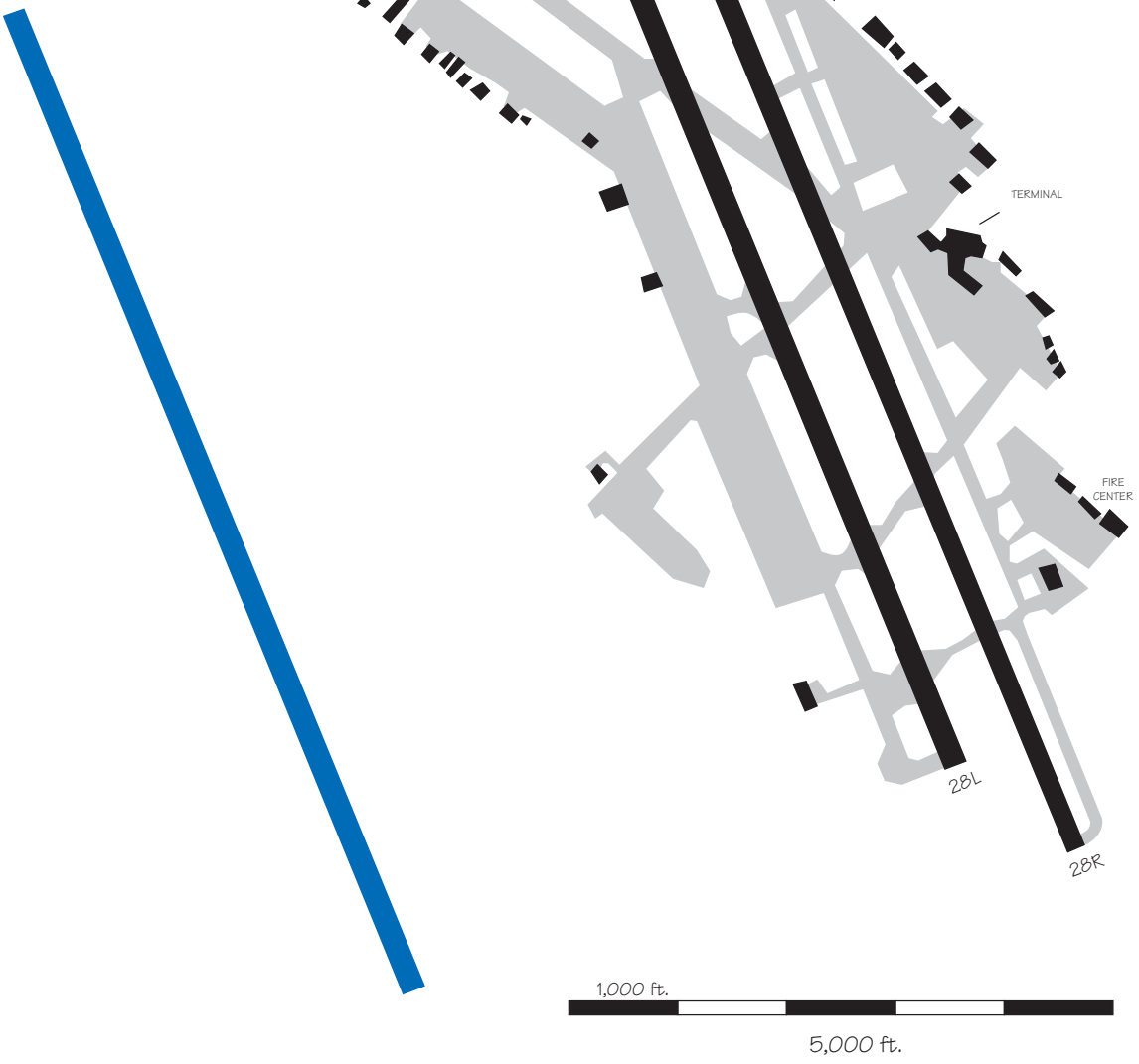
BNA — Nashville International Airport

A new Runway 2E/20E is planned for the future between 1,500 and 3,500 ft. from Runway 2R/20L. In addition, an extension to Runway 2R/20L is planned.



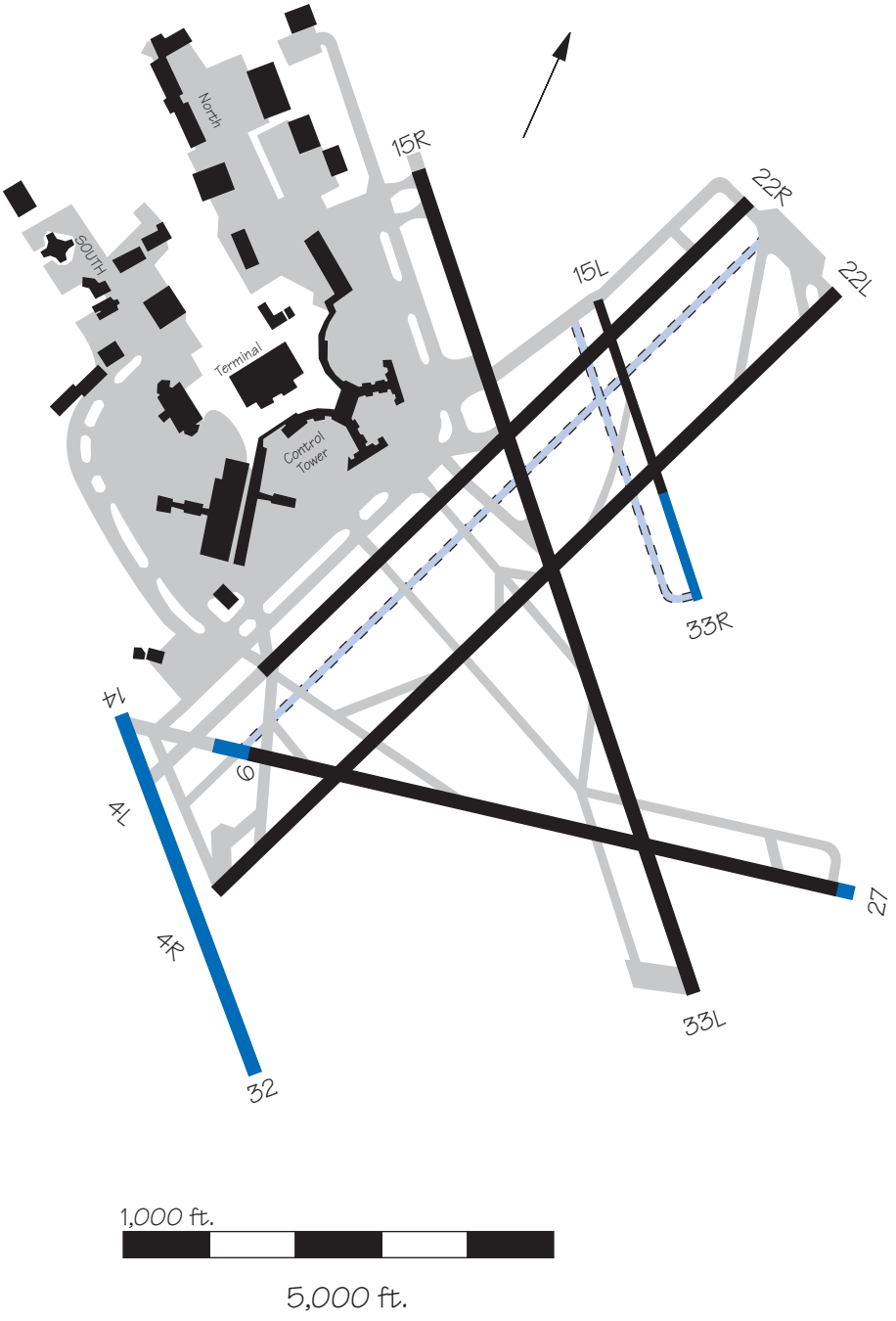
BOI — Boise Air Terminal

A third parallel runway is planned for the long-term future. It is planned 5,400 ft. south of 10R/28L.



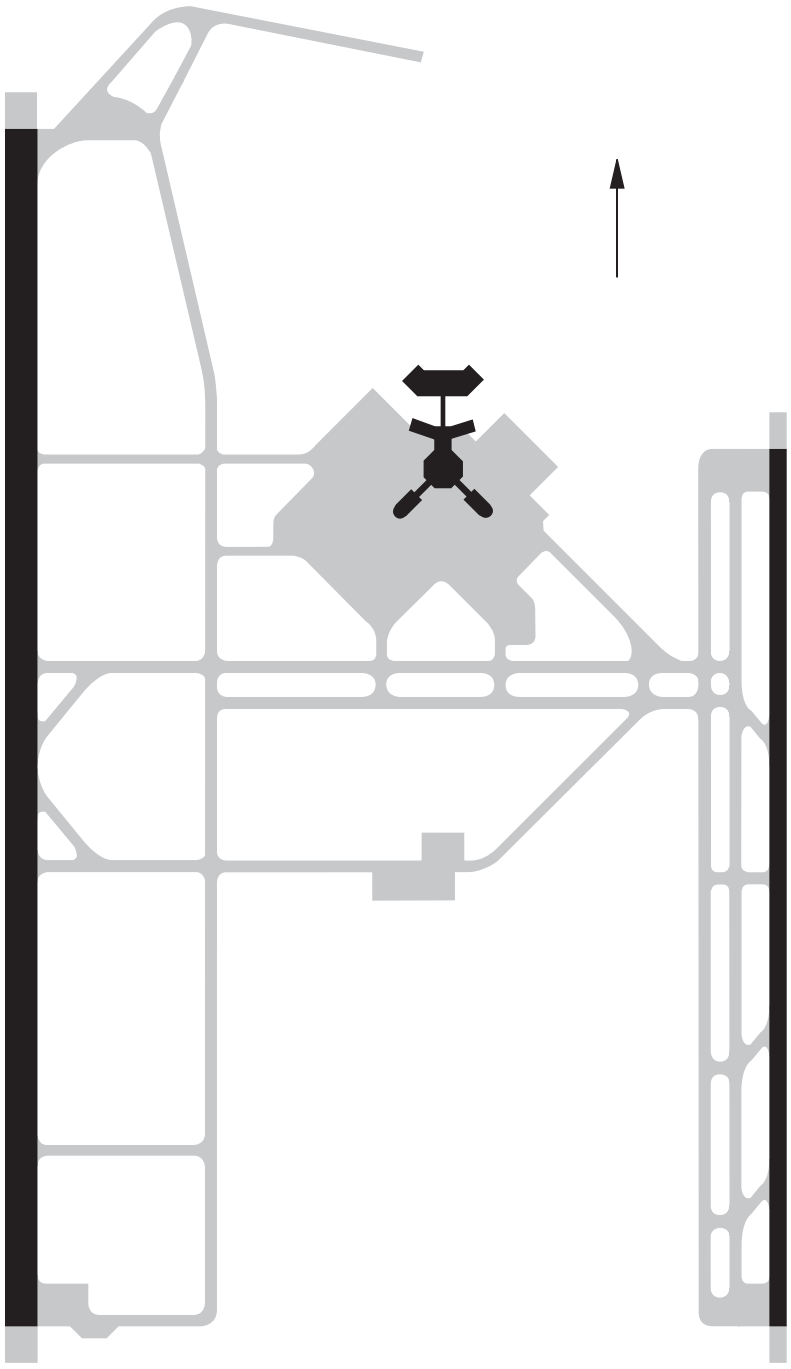
BOS — Boston Logan International Airport

A new uni-directional commuter runway (Runway 14/32) 4,300 ft. from Runway 15R/33L, an extension of Runway 15L/33R to 3,500 ft., and a 400 ft. extension of Runway 9 are being studied. An Environmental Impact Study is currently in progress for the new runway.



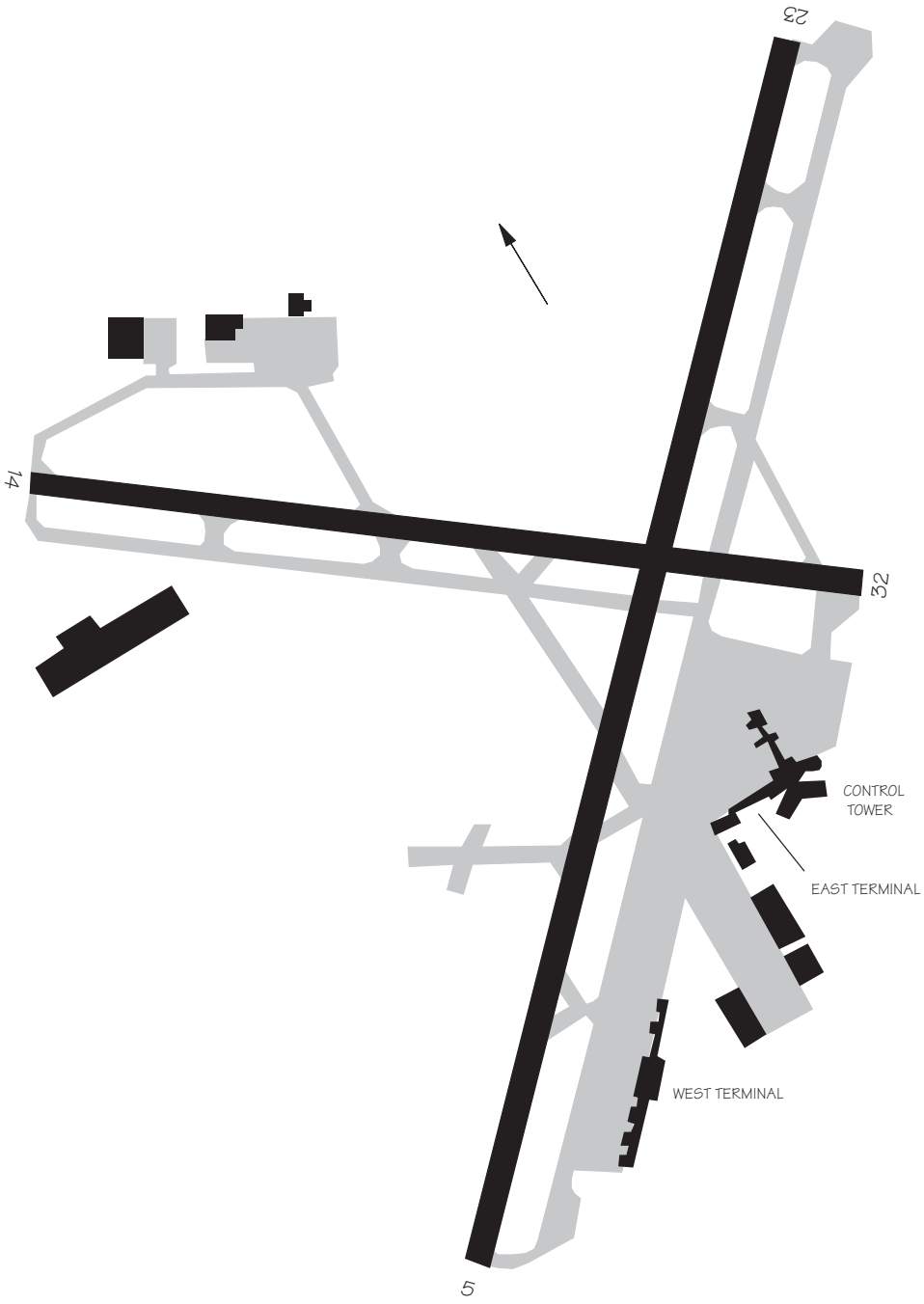
BSM — Austin-Bergstrom International Airport

The community approved and sold approximately $400 million of revenue bonds supporting the redevelopment of the former Bergstrom Air Force base into Austin-Bergstrom International Airport; a replacement airport for the current Robert Mueller Municipal Airport. Austin-Bergstrom International Airport opened for air cargo operations on June 28, 1997. The airport will be opened for air passenger and general aviation operations on May 1, 1999. The new facilities include a recently completed new 9,000 ft. x 150 ft. Runway 17R/35L, as well as associated taxiways, crossfield taxiways, as well as air cargo, air passenger, and general aviation aprons. The airport will also have a new 26 gate air passenger terminal and support facilities. Robert Mueller Municipal will close upon completion of the new airport. The total estimated project cost is currently $585 million. The airport is expected to open on time and under budget.



Bergstrom Air Force Base Conversion
Opening Day Layout Plan
as of 1-31-95

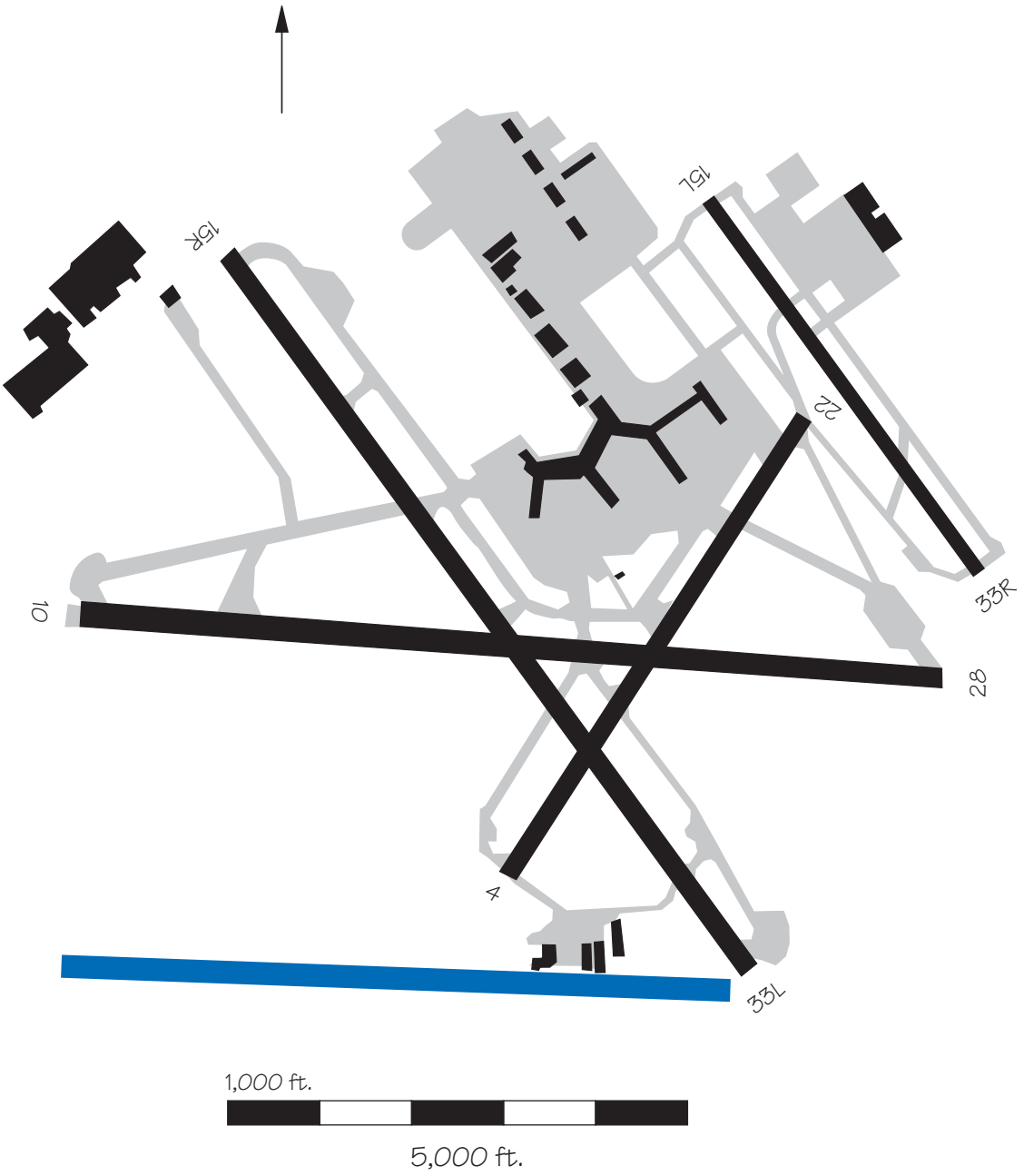
BUF — Greater Buffalo International Airport



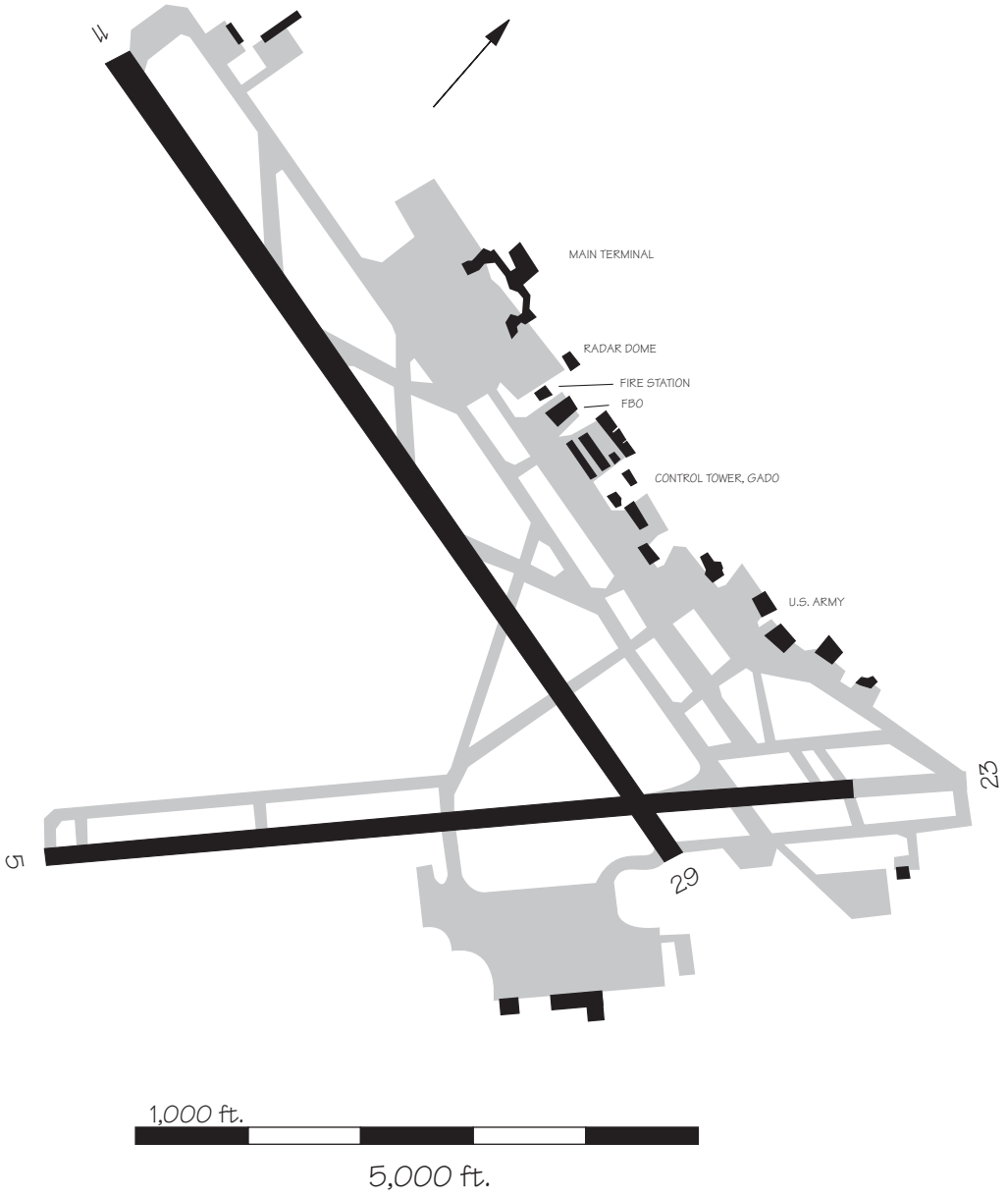
BUR — Burbank-Glendale-Pasadena Airport

BWI — Baltimore-Washington International Airport

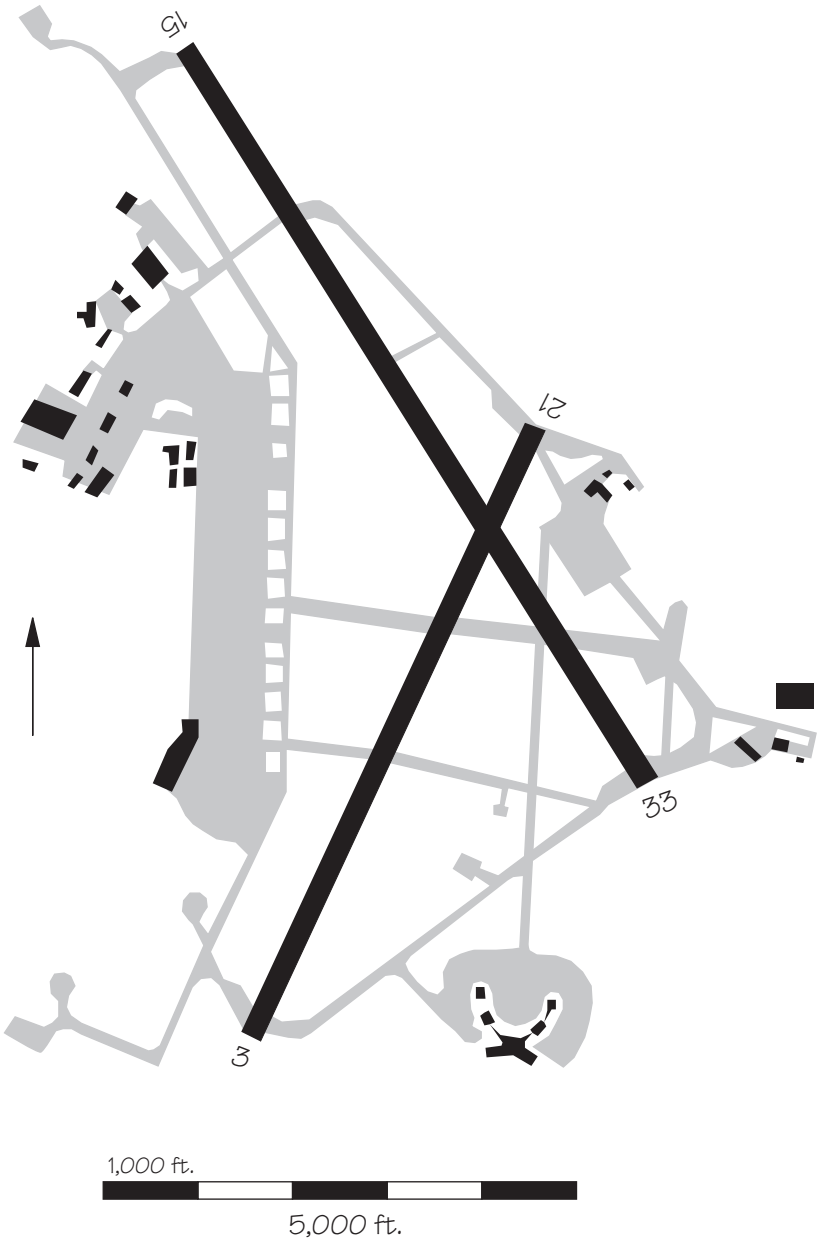
A new 7,800 ft. runway, Runway 10R/28L, is planned to be constructed by 2003, 3,500 ft. south of Runway 10/28. When Runway 10R/28L is constructed, Runway 4/22 will be converted to a taxiway.



CAE — Columbia Metropolitan Airport

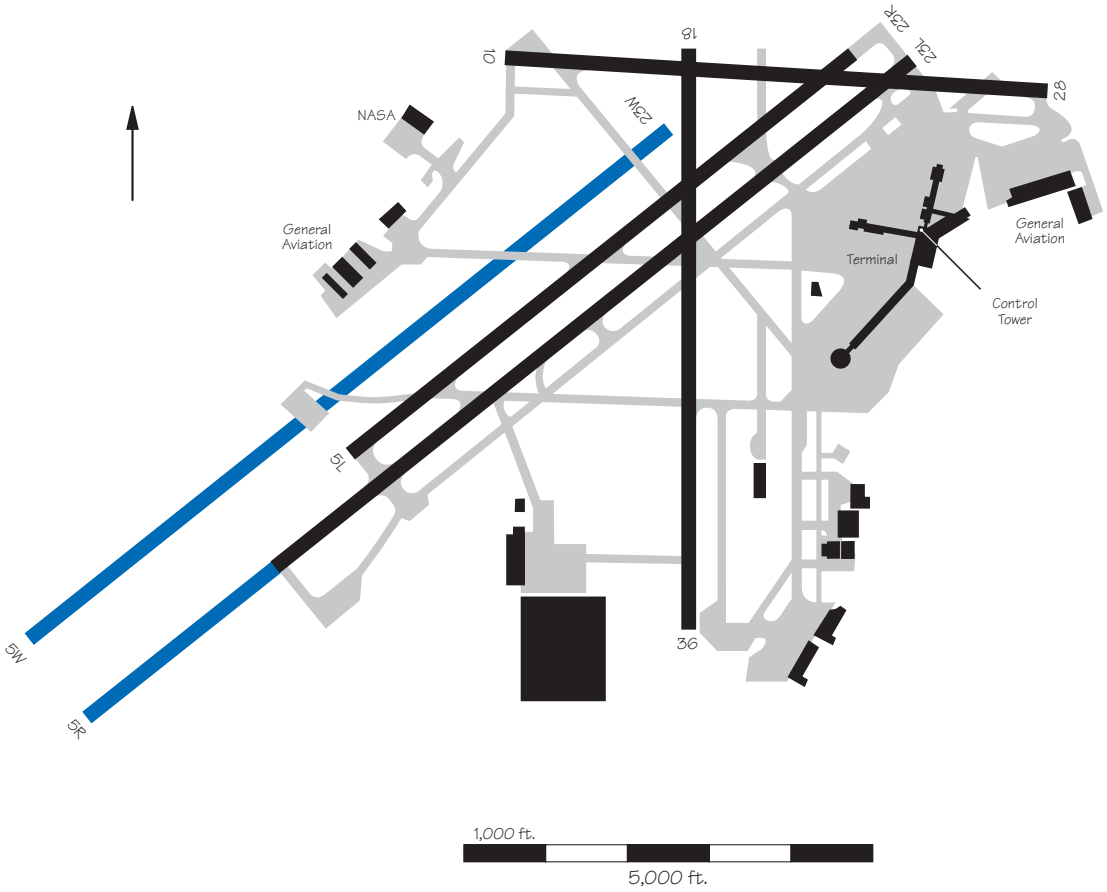


CHS — Charleston AFB International Airport



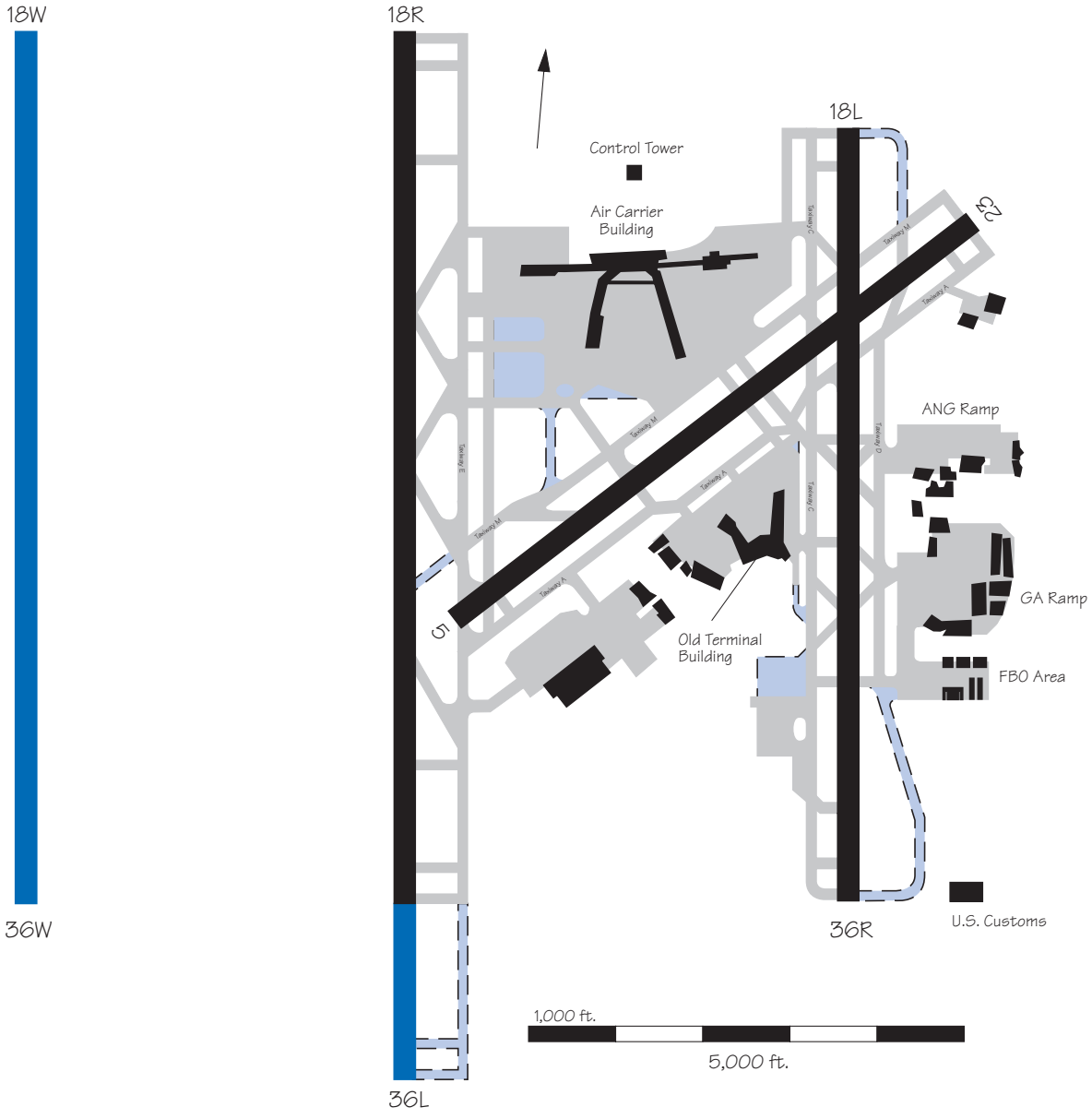
CLE — Cleveland Hopkins International Airport

The Master Plan Update, Phase 1, is conditionally approved. The Airport Layout Plan shows construction of a new Runway 5W/23W that would be 9,000 ft. long and 150 ft. wide. Construction is expected to be completed in 2000 at a cost of $180 million. Also included in the development plan is an extension of the existing Runway 5R/23L from 9,000 ft. to 11,250 ft. at an estimated cost of $40 million and conversion of the existing Runway 5L/23R to a parallel taxiway at a cost of $3 million. All of this work is scheduled for completion by 2005.



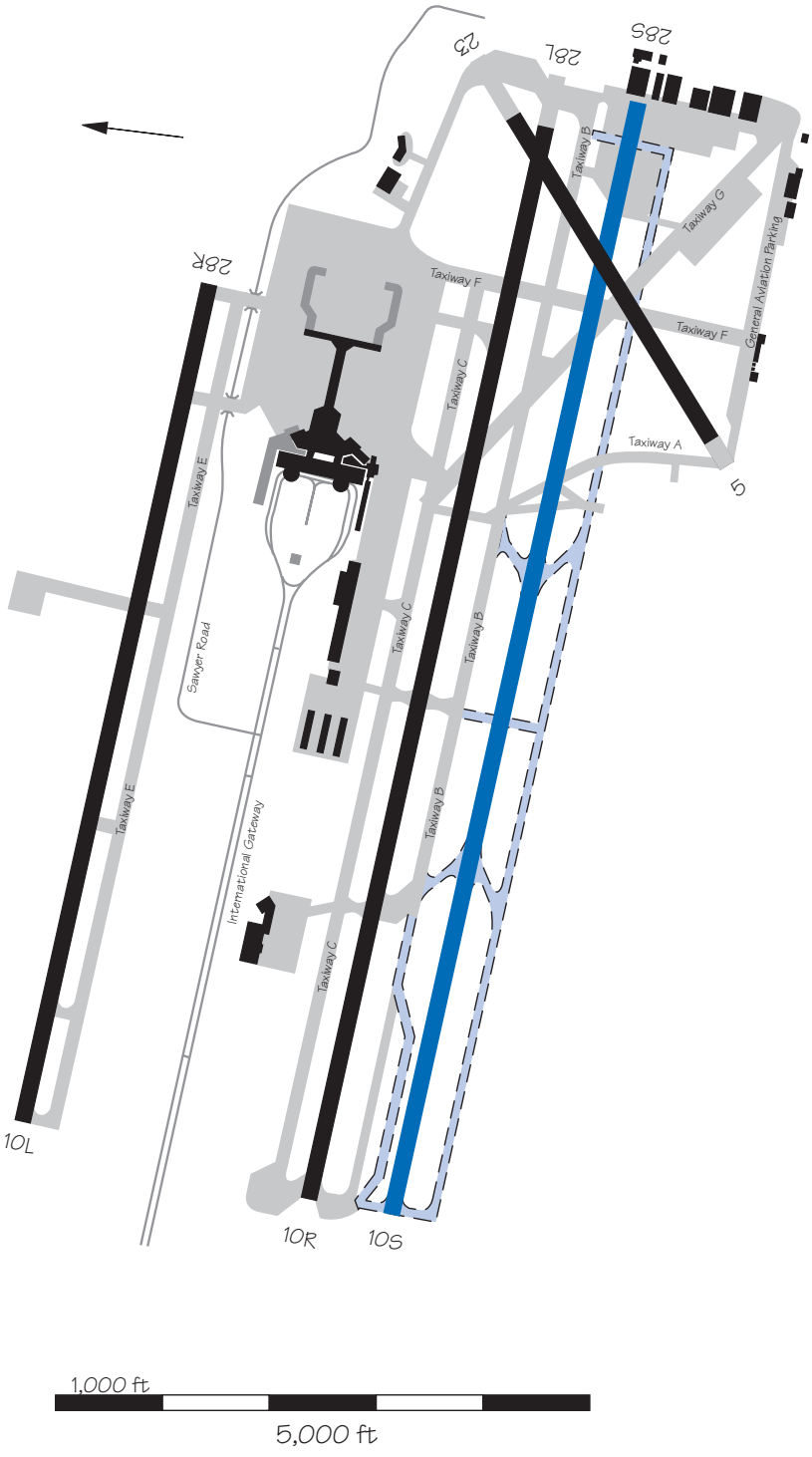
CLT — Charlotte/Douglas International Airport

A third parallel 9,000 ft. runway, 3,700 ft. west of Runway 18R/36L, is being planned. It would permit triple dependent IFR approaches. An Environmental Impact Statement is underway and is expected to be completed by early 1999. Construction is expected to start in late 1999 and be completed in 2001, at an estimated cost of $140 million. A 2,000 ft. extension of Runway 18R/36L is also planned. The estimated cost is $20 million, and it is expected to be operational by 2006. The extension is primarily for departures.

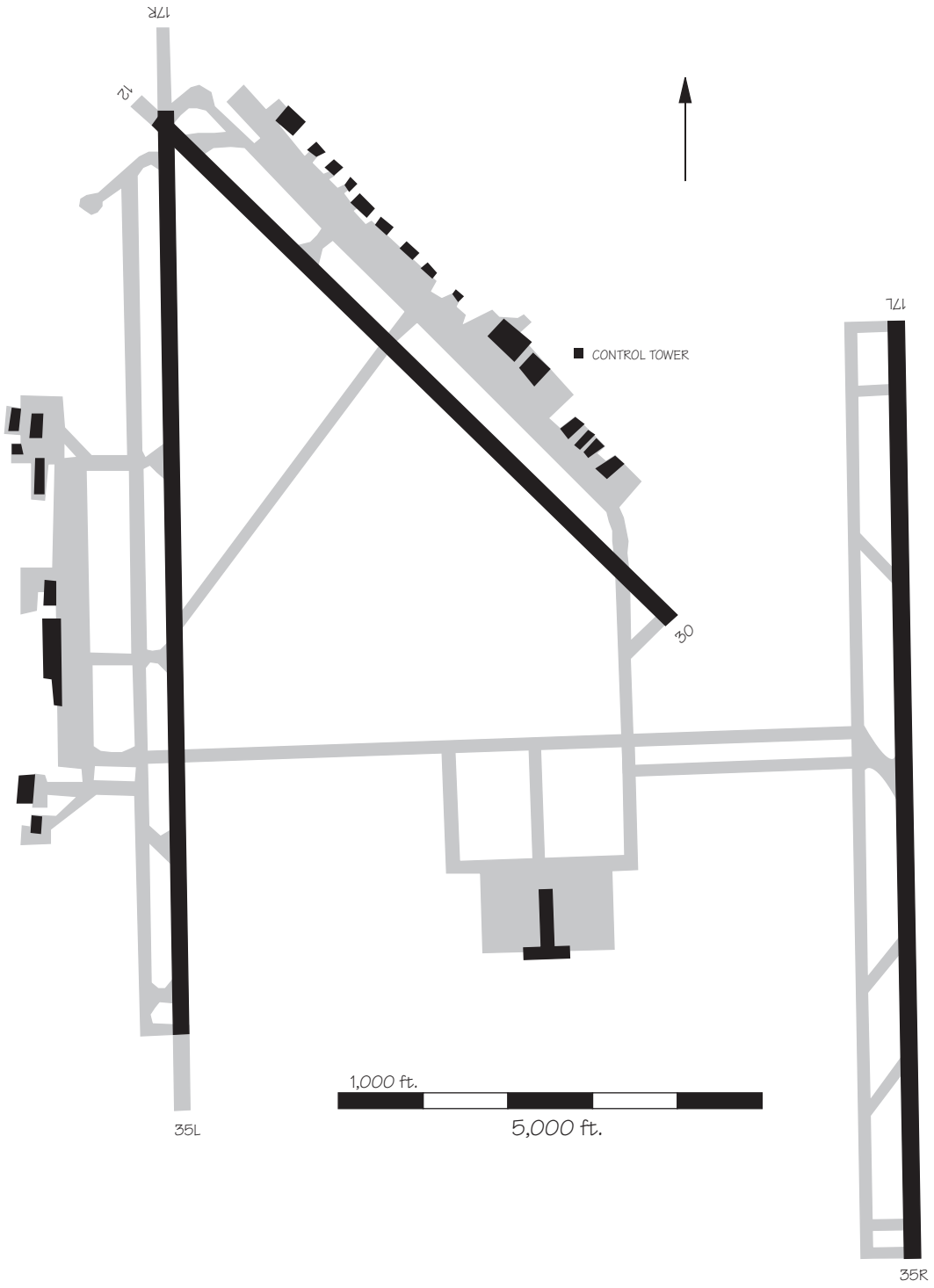


CMH — Port Columbus International Airport

The Airport Layout Plan has been coordinated to show a third parallel Runway 10S/28S constructed 800 ft. south of the existing Runway 10R/28L. This runway will be 10,250 ft. long and 150 ft. wide, with two high speed exits, a 90 degree exit at the center, and a 90 degree bypass taxiway at each end. This would provide a 3,650 ft. separation between the proposed Runway 10S/28S and the existing Runway 10L/28R. With the installation of the Precision Runway Monitor (PRM), the existing Runway 10L/28R and the proposed Runway 10S/28S could be used for arrival air traffic. Runway 10R/28L would be used as the departure runway. Expected operational date is 2020, with project costs estimated at $100 million.

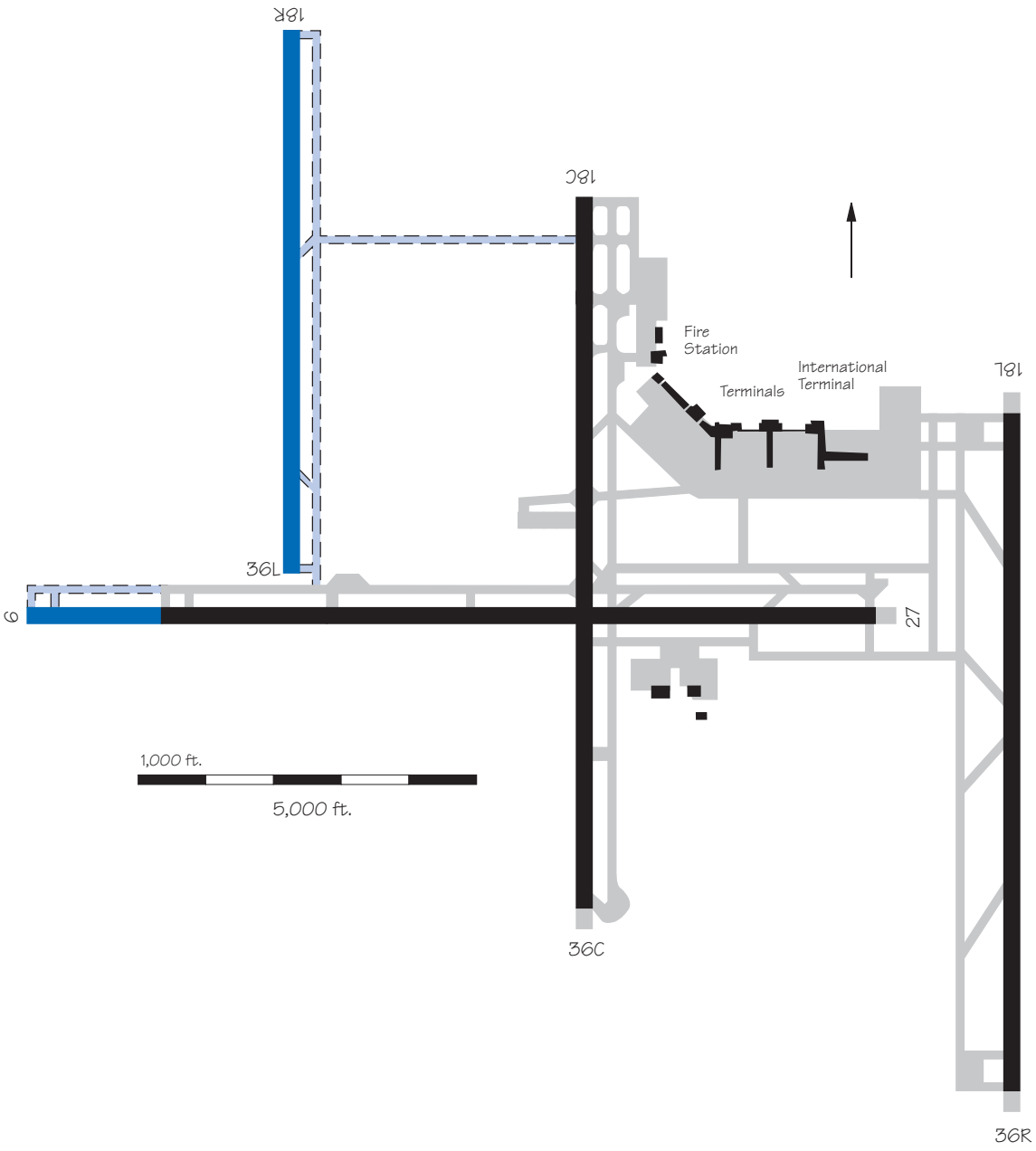


COS — Colorado Springs Municipal Airport



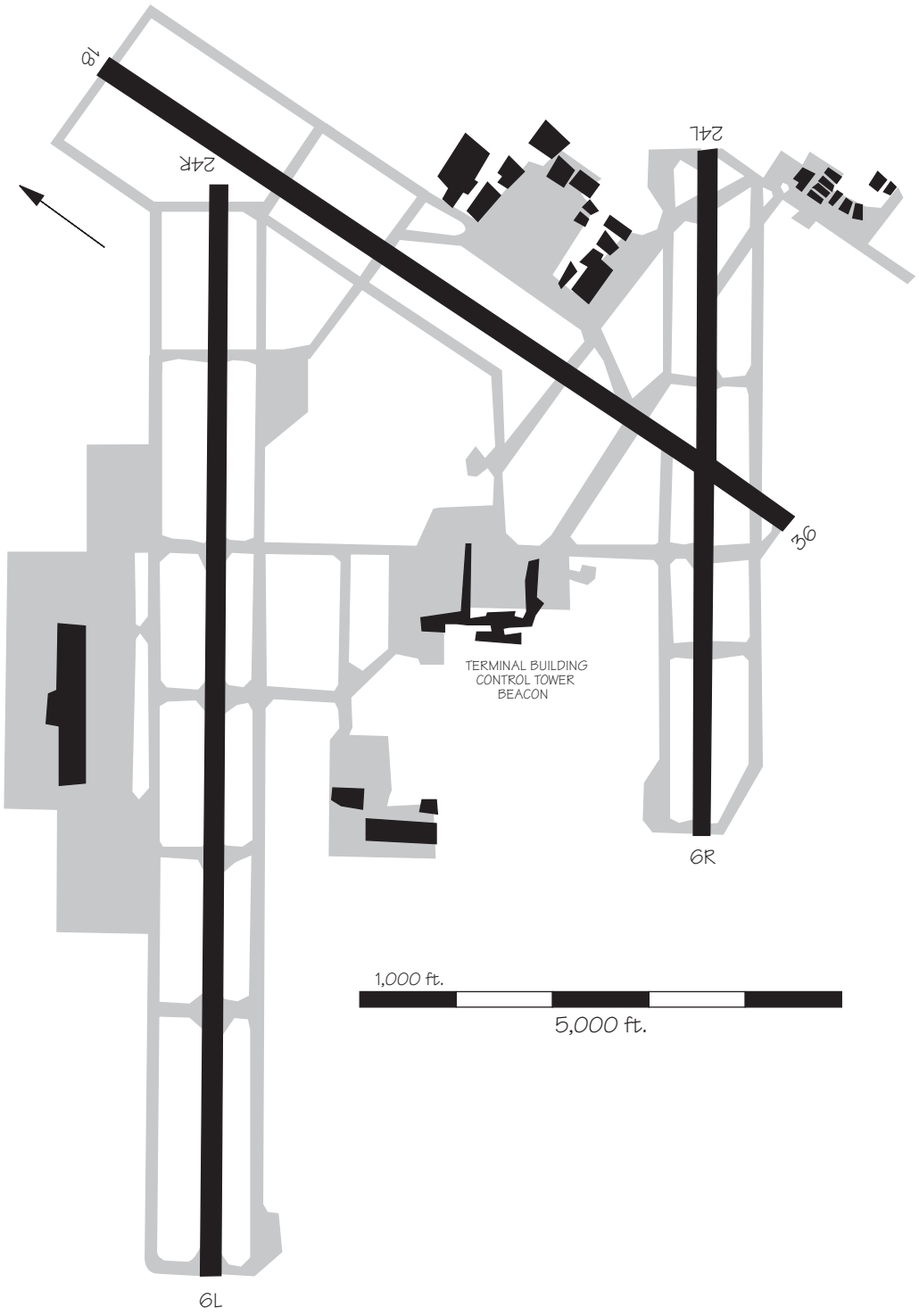
CVG — Greater Cincinnati International Airport

A new 8,000 ft. third parallel Runway 18R/36L is planned to be located 4,300 ft. west of the existing Runway 18R/36L. The estimated cost is $233 million. The expected operational date is 2004. The new runway may allow triple independent IFR approaches. A 2,000 ft. extension of Runway 9/27 is also planned. It is expected to be completed by 2003, at an estimated cost of $12 million. The extension would allow departures of aircraft with heavier payloads and/or longer haul-lengths. An EIS is currently underway for both projects, and is expected to be completed by 2000.

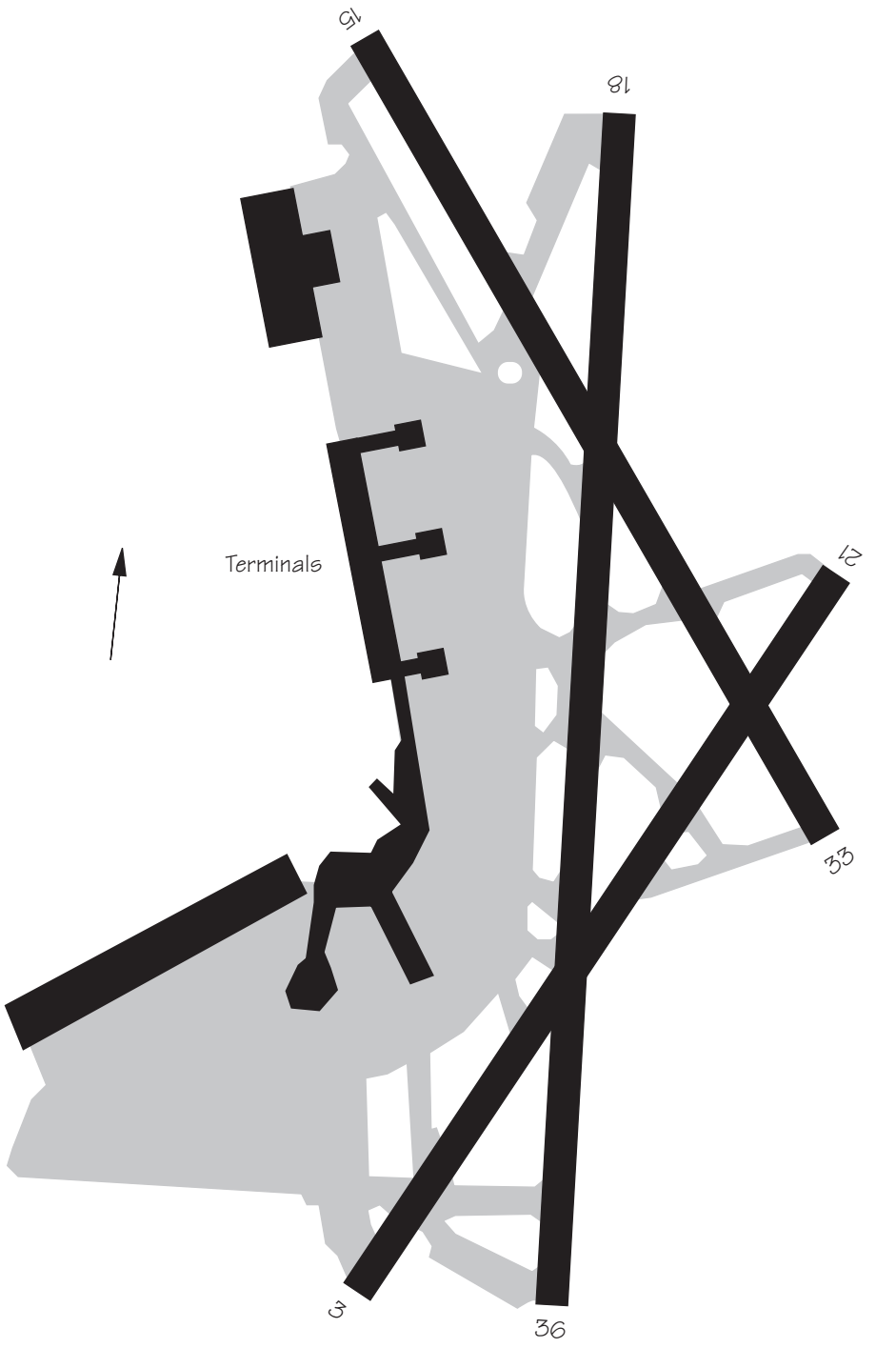


DAL — Dallas-Love Field

DAY — Dayton International Airport

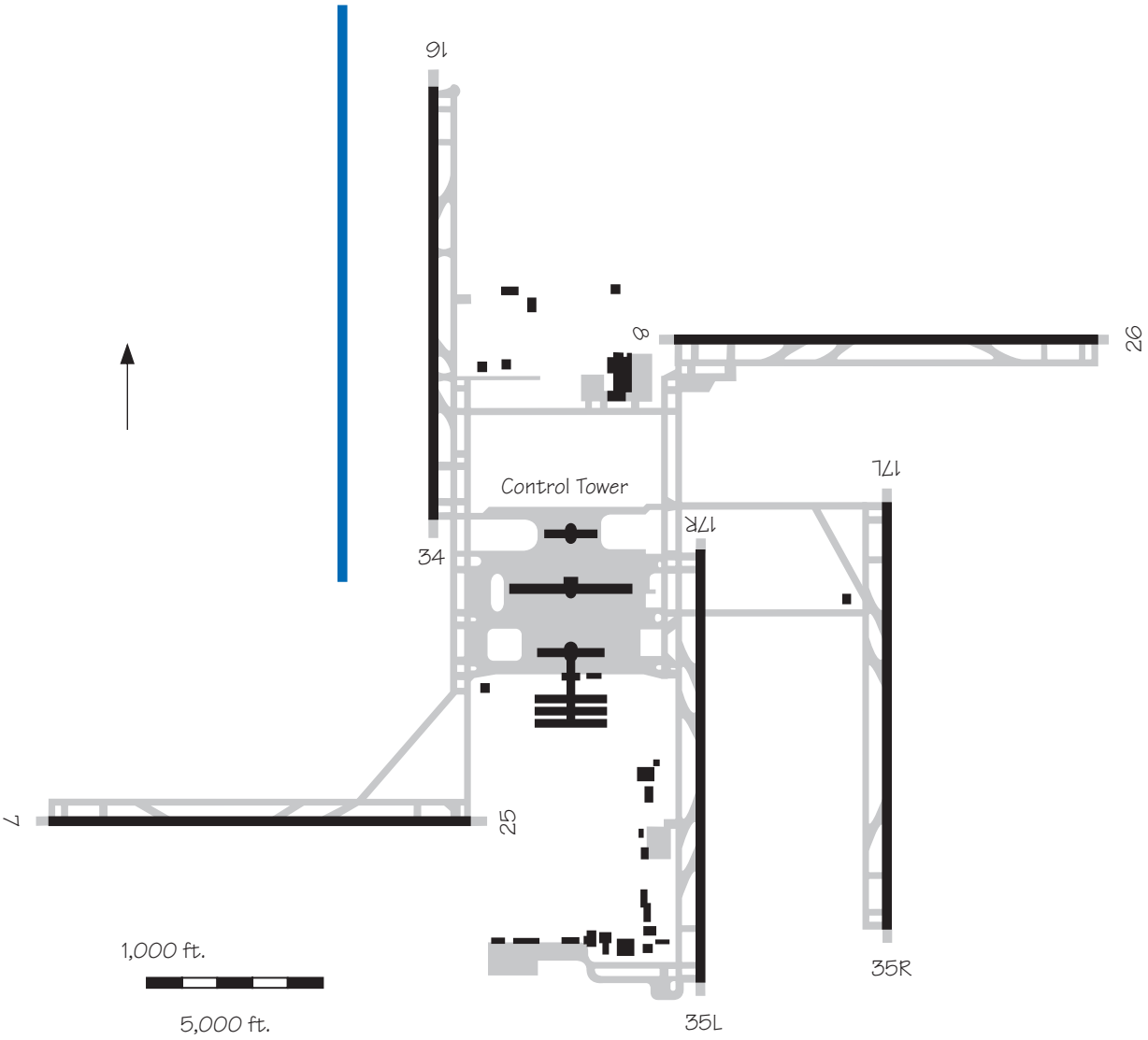


DCA — Ronald Reagan National Airport



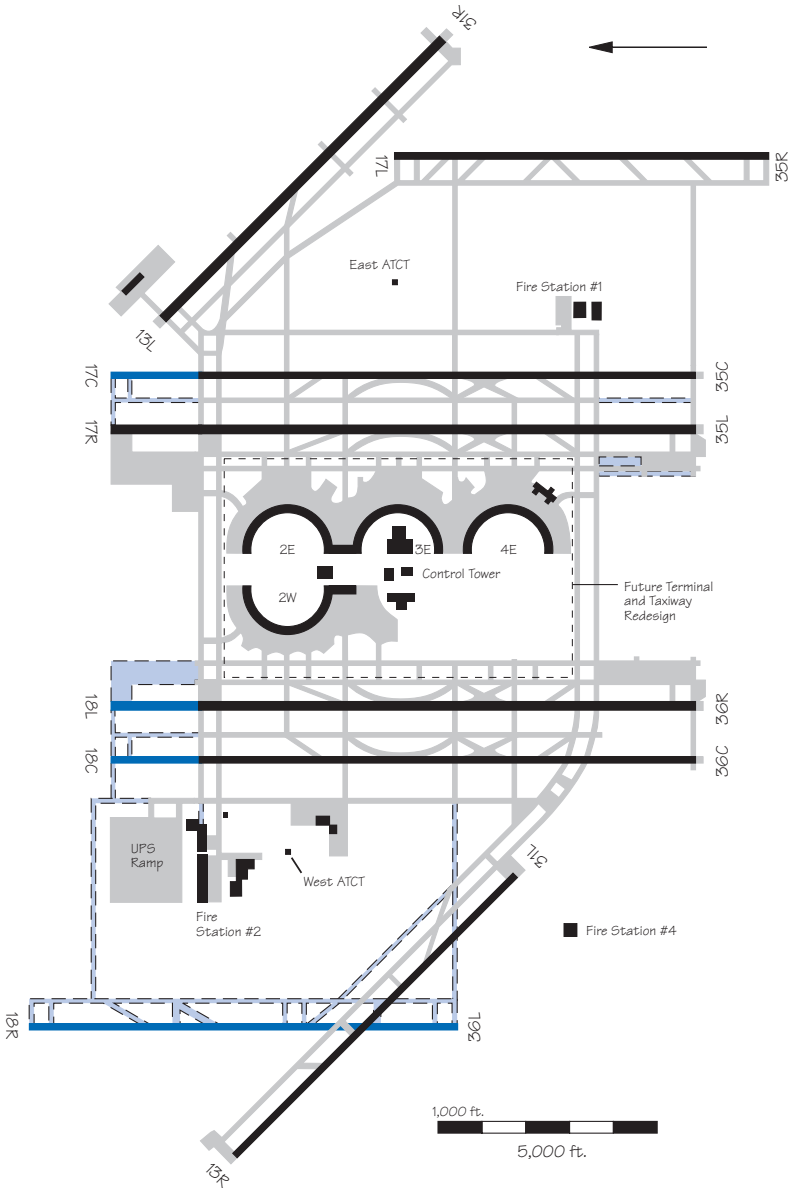
DEN — Denver International Airport

Runway 16R/34L is the last of the six original runways to be built at the new airport. It will be separated 2,600 ft. from Runway 16L/34R, and be 16,000 ft. in length. The runway is expected to be completed in 2002, at an estimated cost of $103 million.



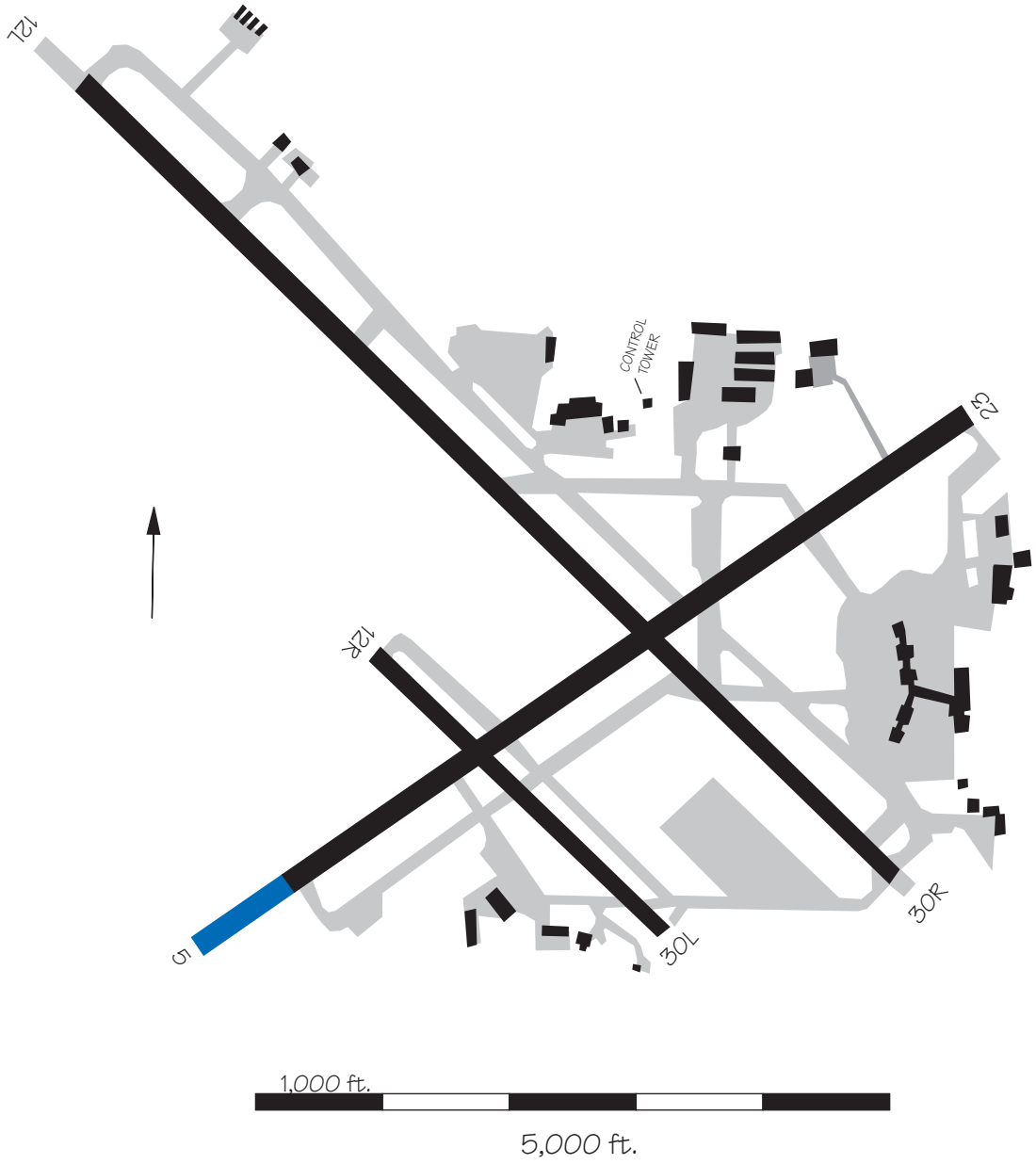
DFW — Dallas-Fort Worth International Airport

Proposed 2,000 ft. extensions to all of the north/south parallel runways will provide an overall length of 13,400 ft. for each. Environmental assessment for the extension to Runway 17C/35C, Runway 18L/36R, and Runway 18R/36L were completed in 1998. The estimated cost of each extension is $25 million. A terminal expansion program is underway that will add five new jet departure gates to the south side of Terminal 2W; provide baggage and passenger connections to Terminal 2E; and renovate a portion of Terminal 2W. The total cost of this program is approximately $100 million and is scheduled for completion in 1999. Construction on the west runway, Runway 18R/36L, will begin when warranted by aviation demand. It could be available as early as 2003. The estimated cost is $268 million. It will be located 5,800 ft. west of Runway 18R/36L (to be renamed 18C/36C). The runway will be used primarily for arrivals. The addition of Runway 18R/36L will allow DFW to accommodate quadruple simultaneous precision instrument approaches.



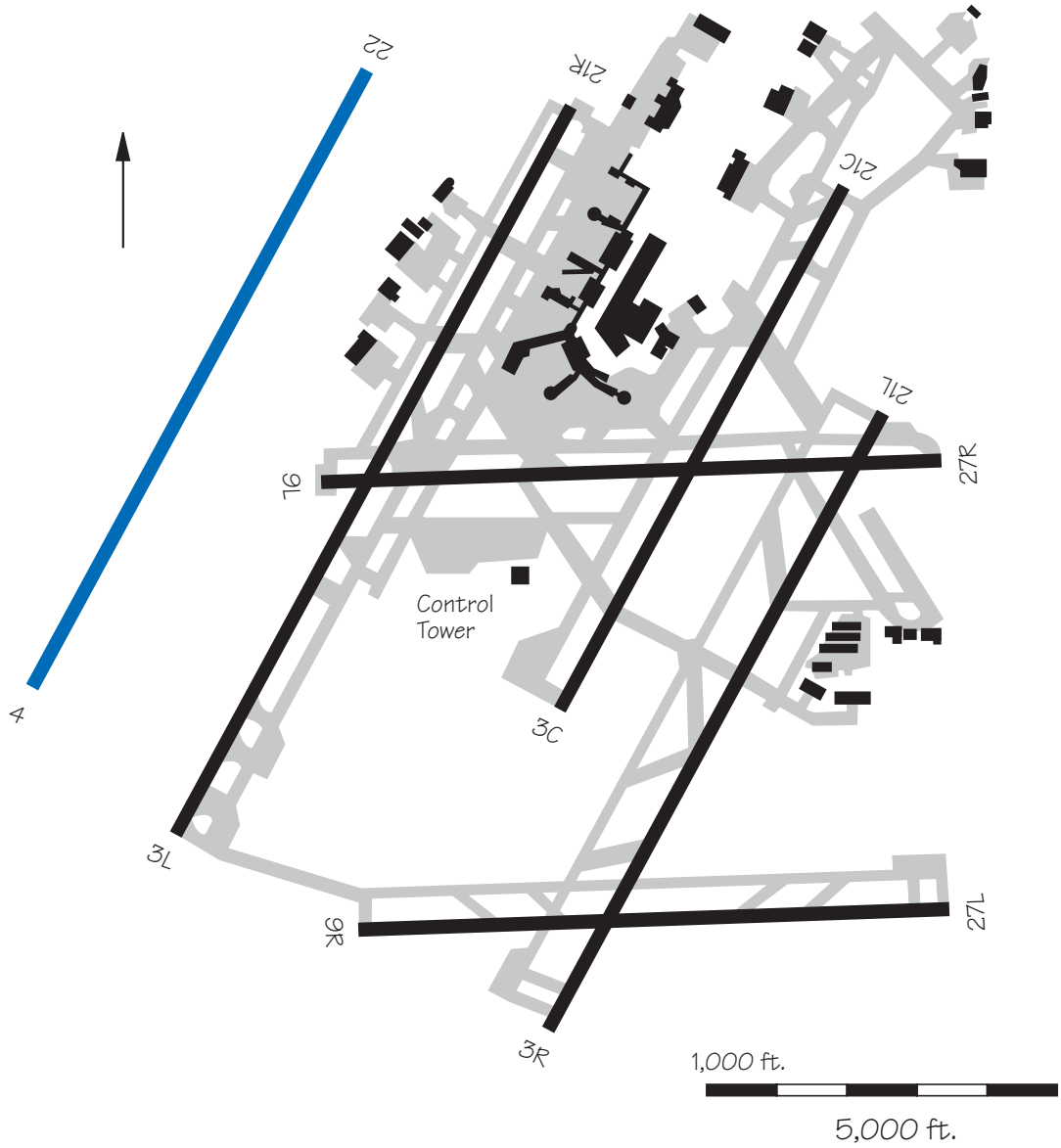
DSM — Des Moines International Airport

A Finding of No Significant Impact (FONSI) was approved in August, 1995, for a southwest extension of Runway 5/23. Construction began in 1997, and is expected to be completed in 2001. Cost for construction is estimated at $31 million, with an additional estimated $23 million for road relocation.



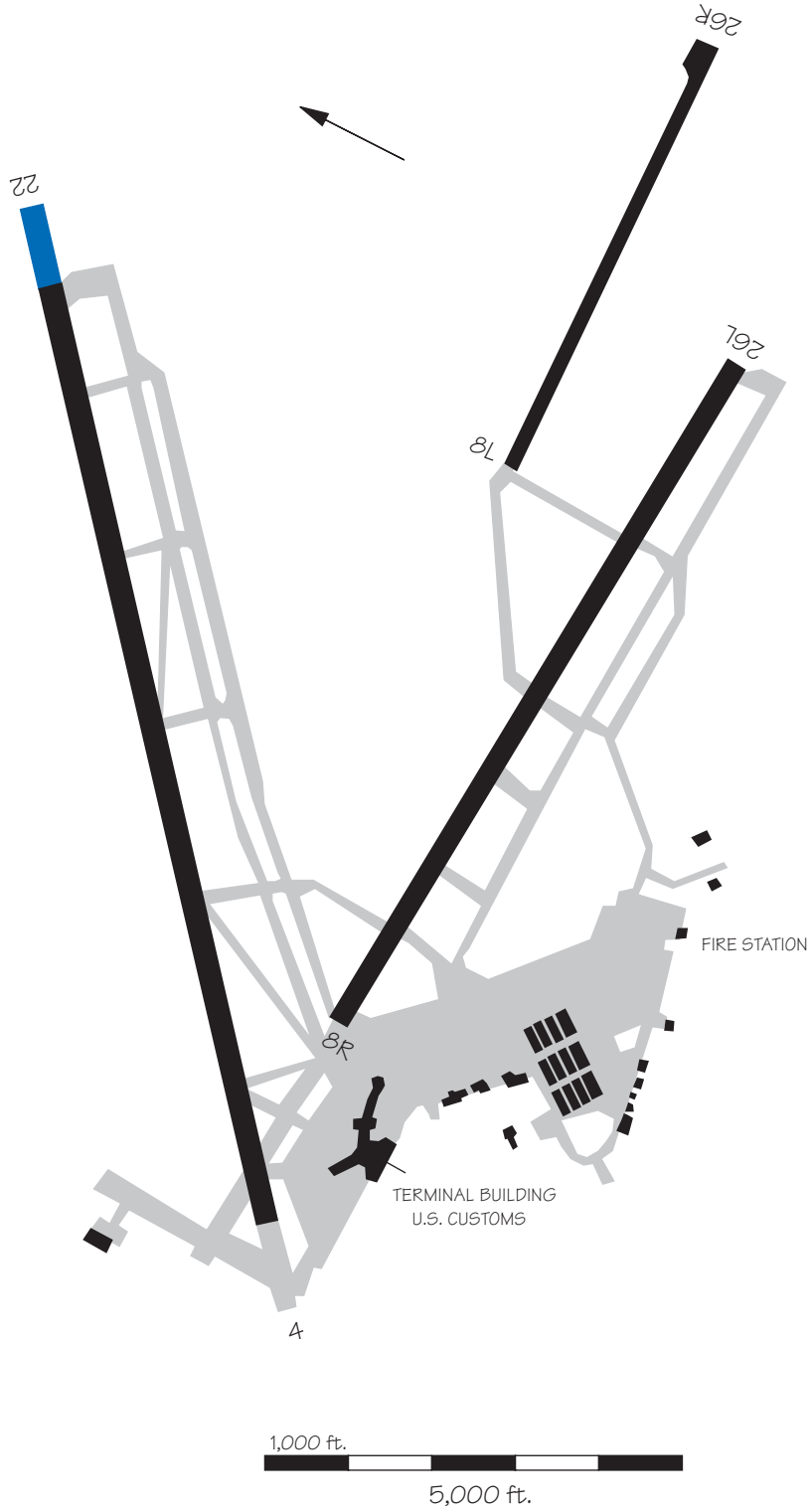
DTW — Detroit Metropolitan Wayne County Airport

A fourth north-south parallel, Runway 4/22 is planned. Construction is expected to begin in 1999 and should be completed in 2001. The estimated cost of construction is $116.5 million. This runway could potentially permit triple IFR arrivals with one dependent and one independent pairing. An environmental assessment was submitted in September 1989, and a record of decision was issued in March 1990. Land acquisition will be completed by early 1999. Relocation of roads, utilities, and drainage is underway.



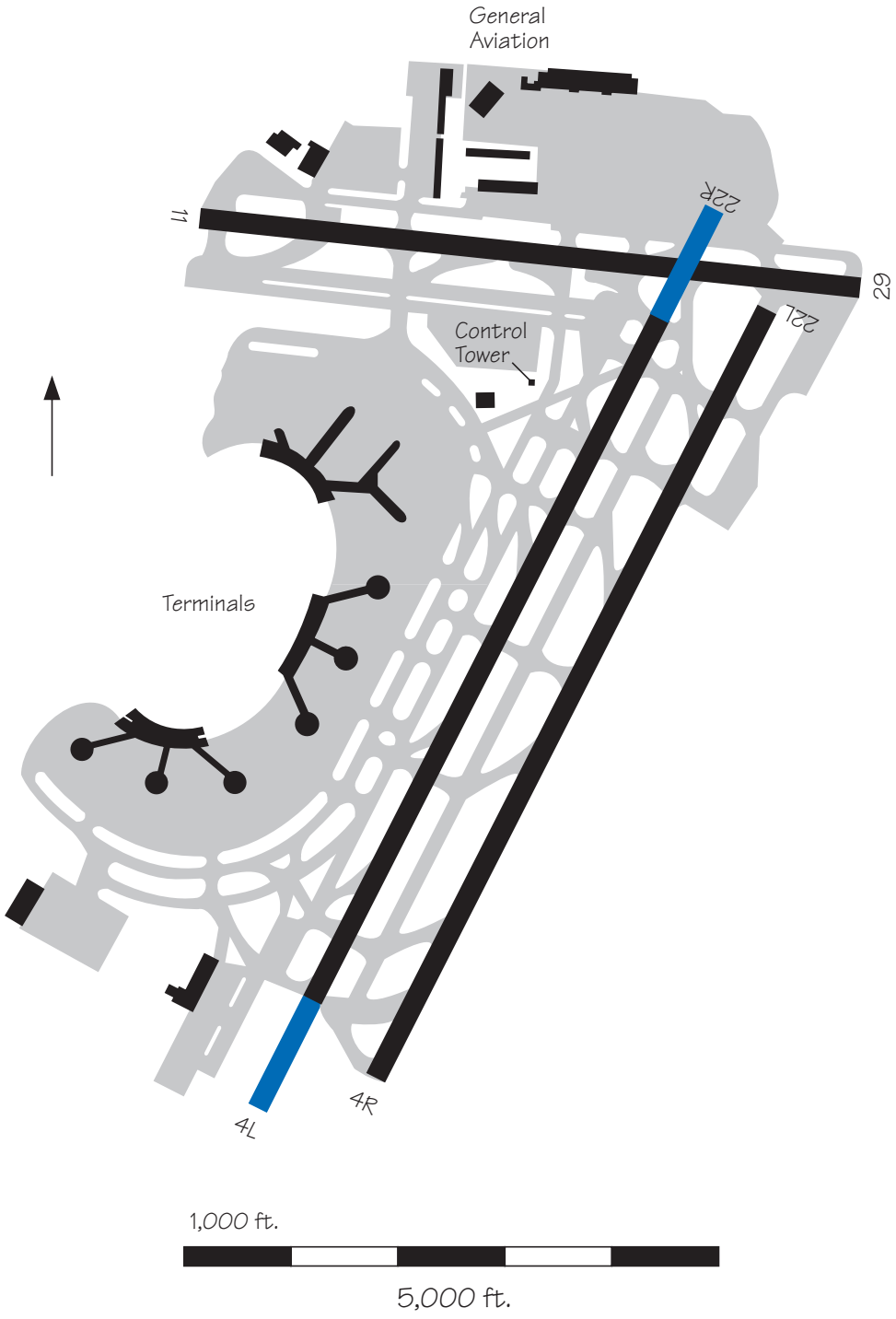
ELP — El Paso International Airport

A 1,000 ft. extension to Runway 22 is included in the currently approved Passenger Facility Charge for the year 2000. Estimated cost would be $8 million.



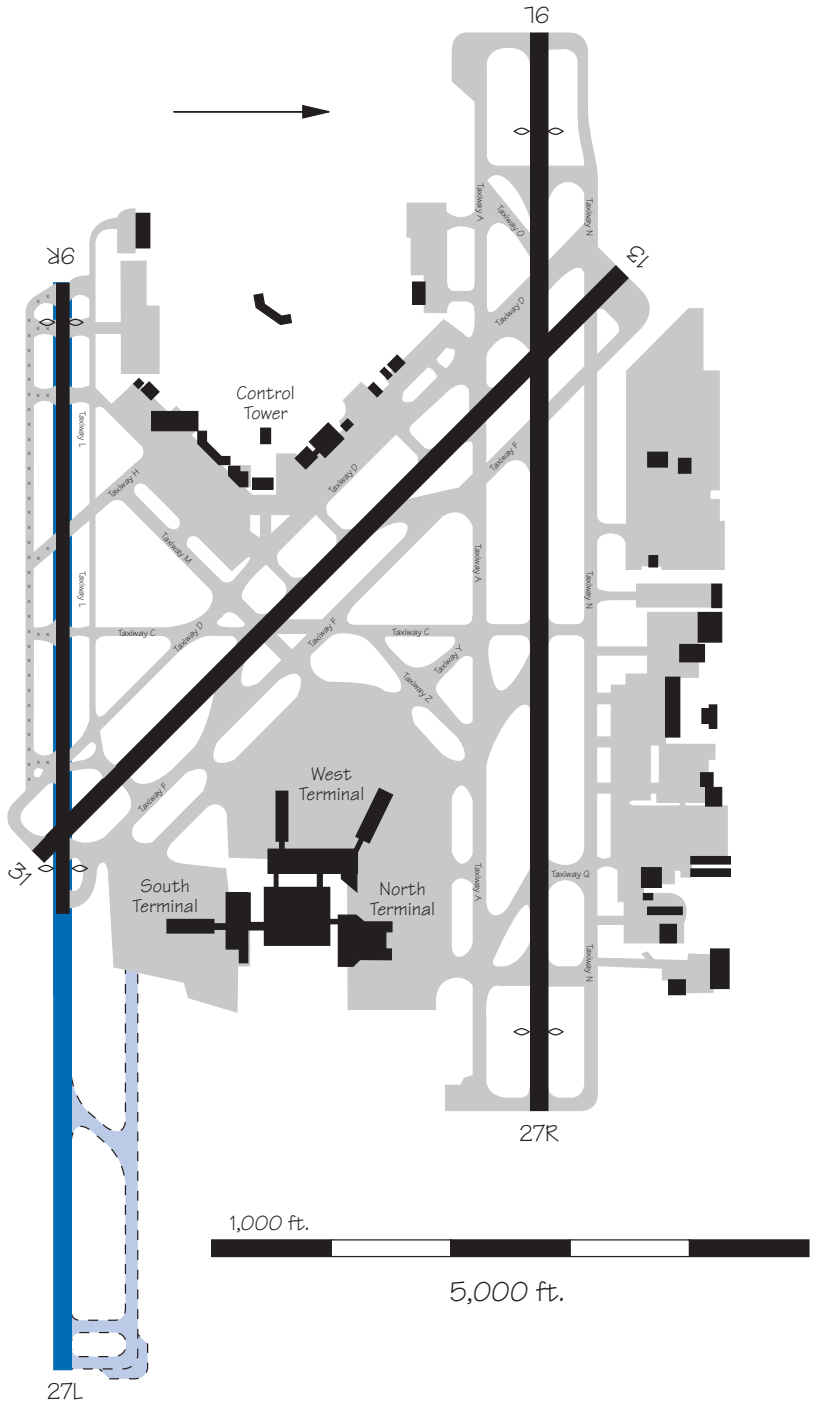
EWR — Newark International Airport

An extension to Runway 4L/22R is currently under construction. The estimated operational date is 2000.



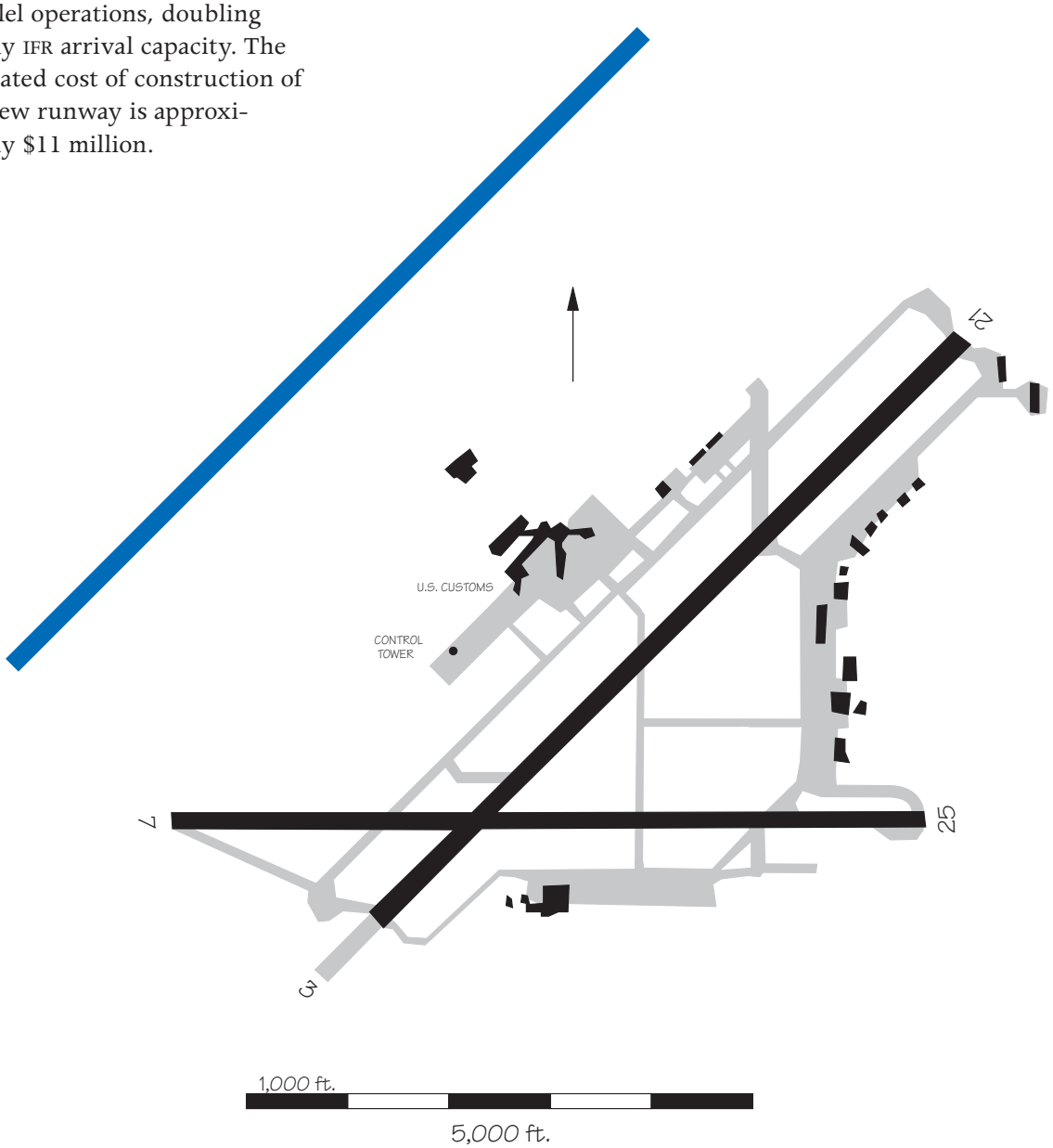
FLL — Fort Lauderdale-Hollywood International Airport

An extension of the short parallel Runway 9R/27L to 9,000 ft. is planned to provide the airport with a second parallel air carrier runway. Construction is expected to begin in 2002. The estimated cost of construction is $300 million. The anticipated operational date is 2005. An EIS is underway and expected to be completed in 2000. The extended runway would be used for arrivals and departures and would allow dual dependent IFR arrivals of all types of aircraft.



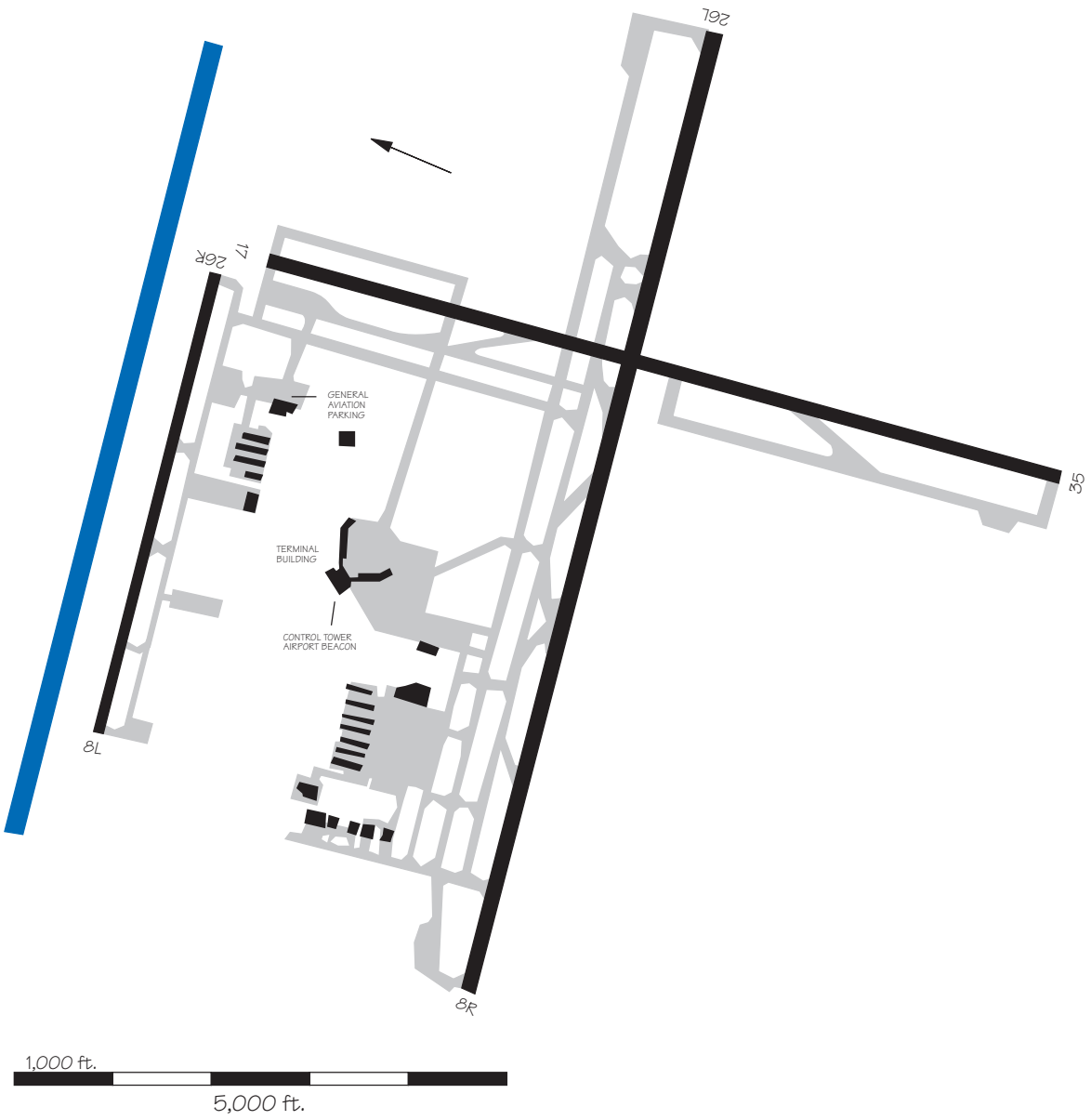
GEG — Spokane International Airport

Future projects include the construction of a new parallel Runway 3L/21R. The new runway will be 8,800 ft. long by 150 ft. wide and will be separated from Runway 3R/21L by 4,300 ft. This would enable independent parallel operations, doubling hourly IFR arrival capacity. The estimated cost of construction of the new runway is approximately $11 million.



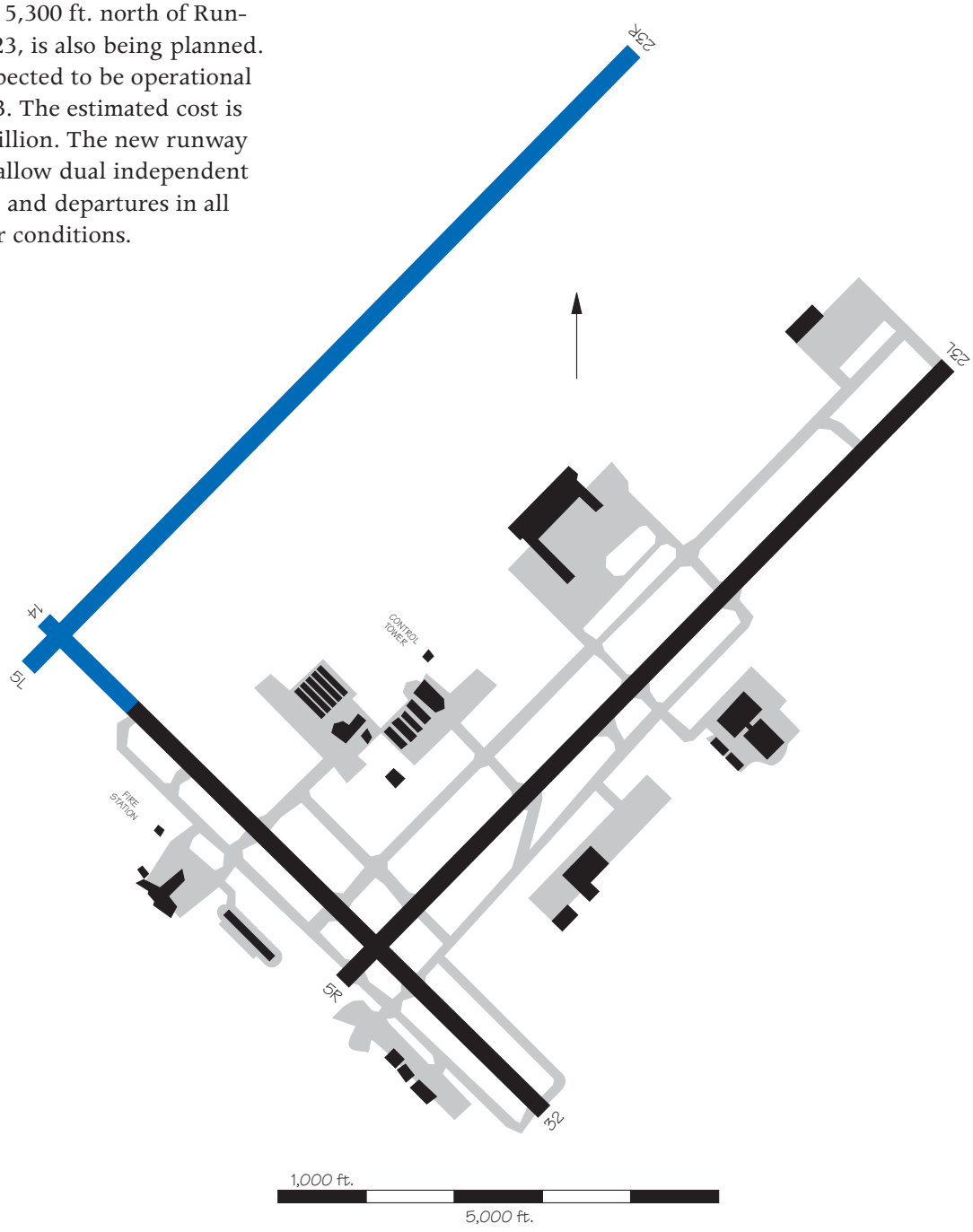
GRR — Grand Rapids Kent County International Airport

A new 7,000 ft. parallel Runway 8L/26R is planned for future development. The current 8L/26R would be converted into a taxiway at that time.



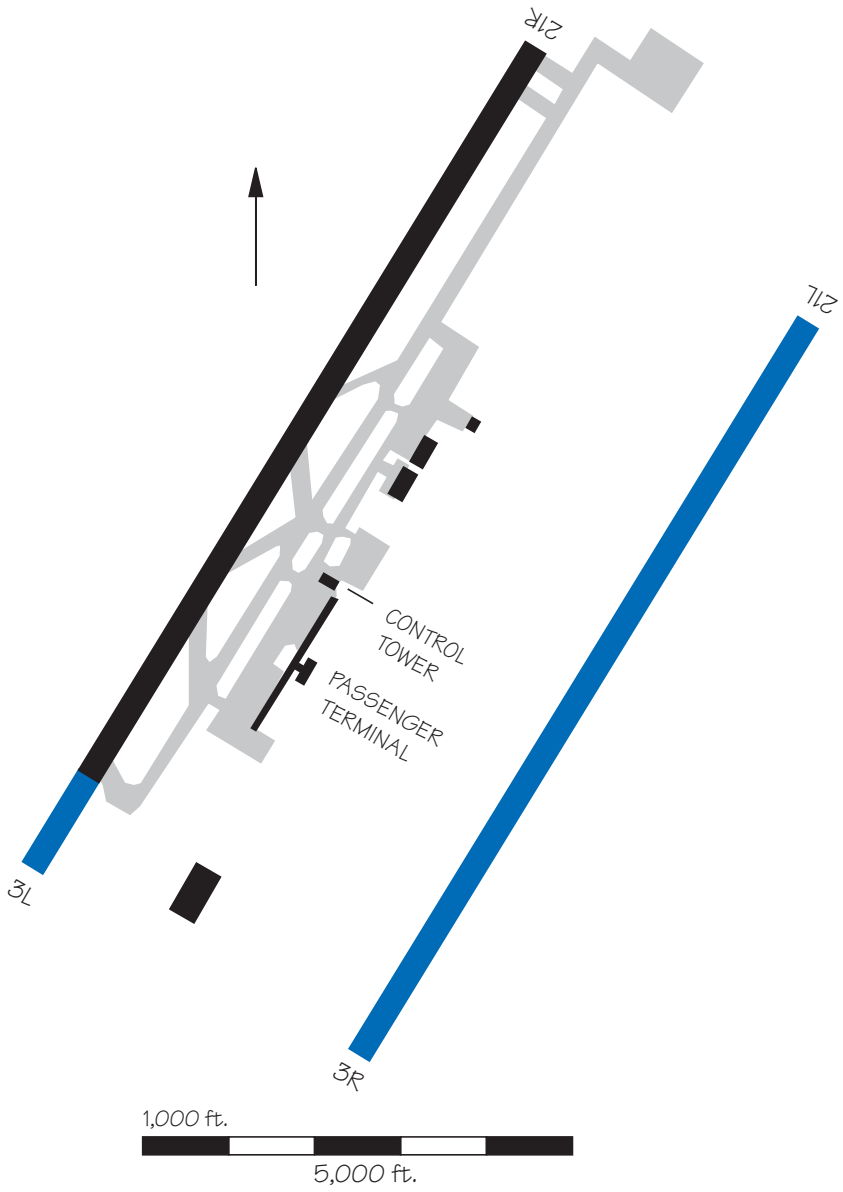
GSO — Greensboro Piedmont Triad International Airport

An extension of Runway 14/32 is planned. It is expected to be operational by 2002, at a cost of $27 million. Construction of a new 10,000 ft. parallel Runway 5L/23R, 5,300 ft. north of Runway 5/23, is also being planned. It is expected to be operational by 2003. The estimated cost is $150 million. The new runway would allow dual independent arrivals and departures in all weather conditions.



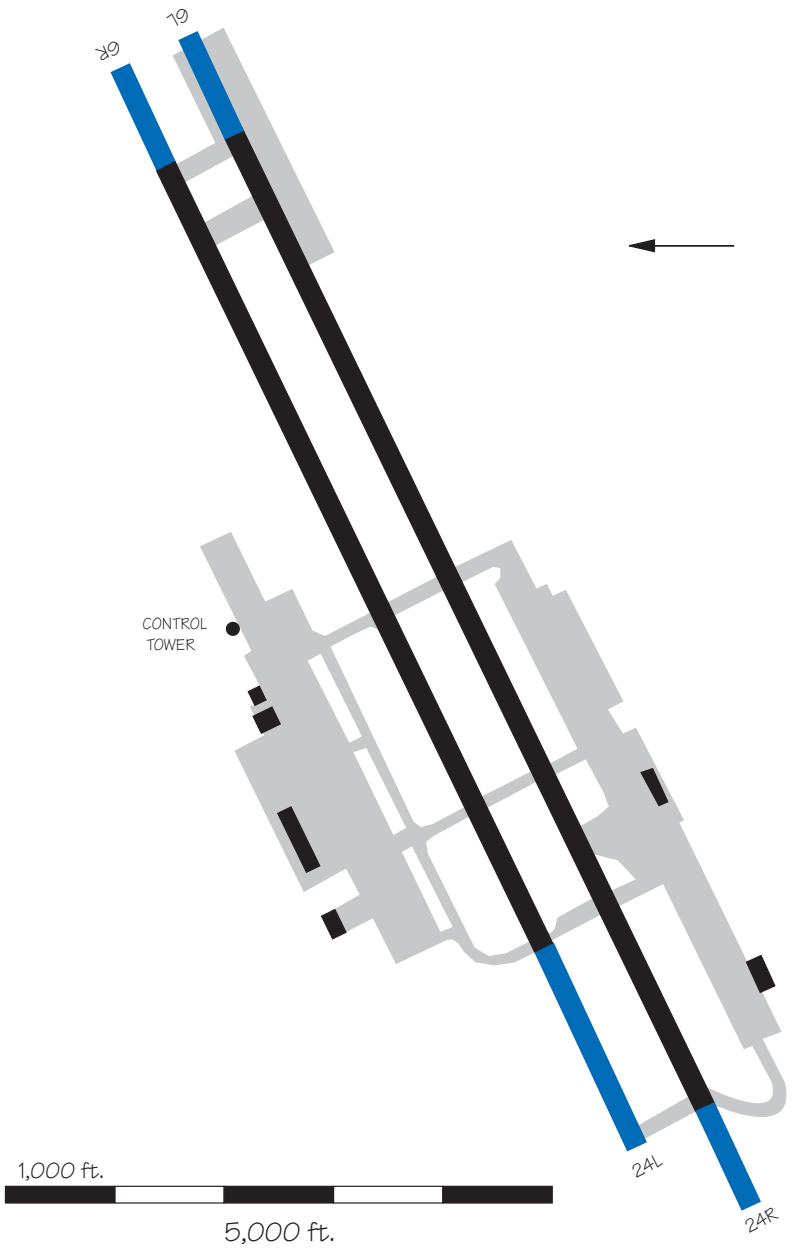
GSP — Greer Greenville-Spartanburg Airport

A new 8,200 ft. parallel Runway 3R/21L is anticipated in 2010 at an estimated cost of $65 million. Presently, it is planned to have a 4,300 ft. separation from Runway 3L/21R. This would allow dual independent IFR arrivals, potentially doubling hourly IFR arrival capacity. Also, an extension of Runway 3L/21R to 11,000 ft. is expected to be completed by 1999 at a cost of $34.1 million. The extension would allow departures of aircraft with larger payloads and/or greater haul-lengths.

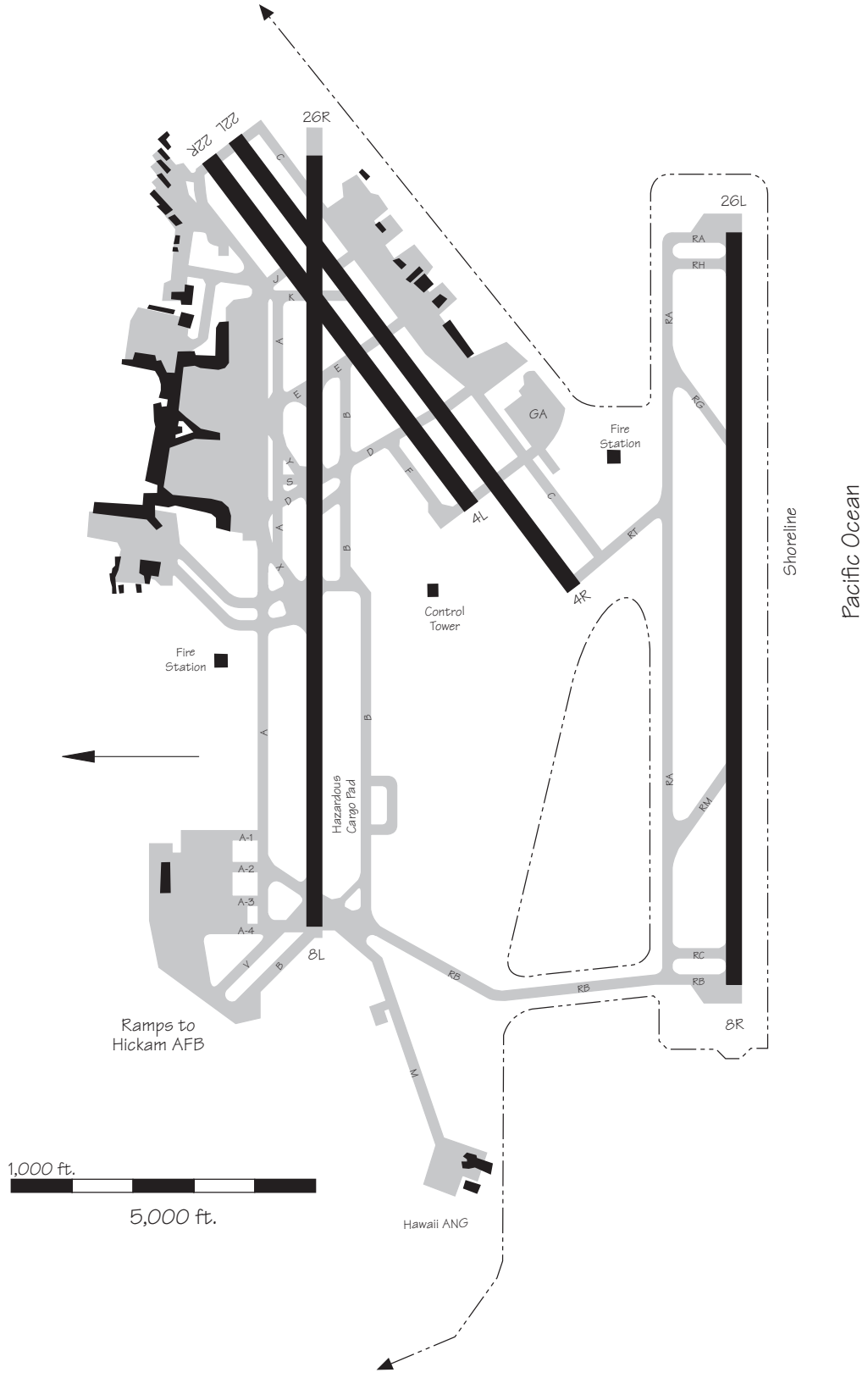


GUM — Guam International Airport

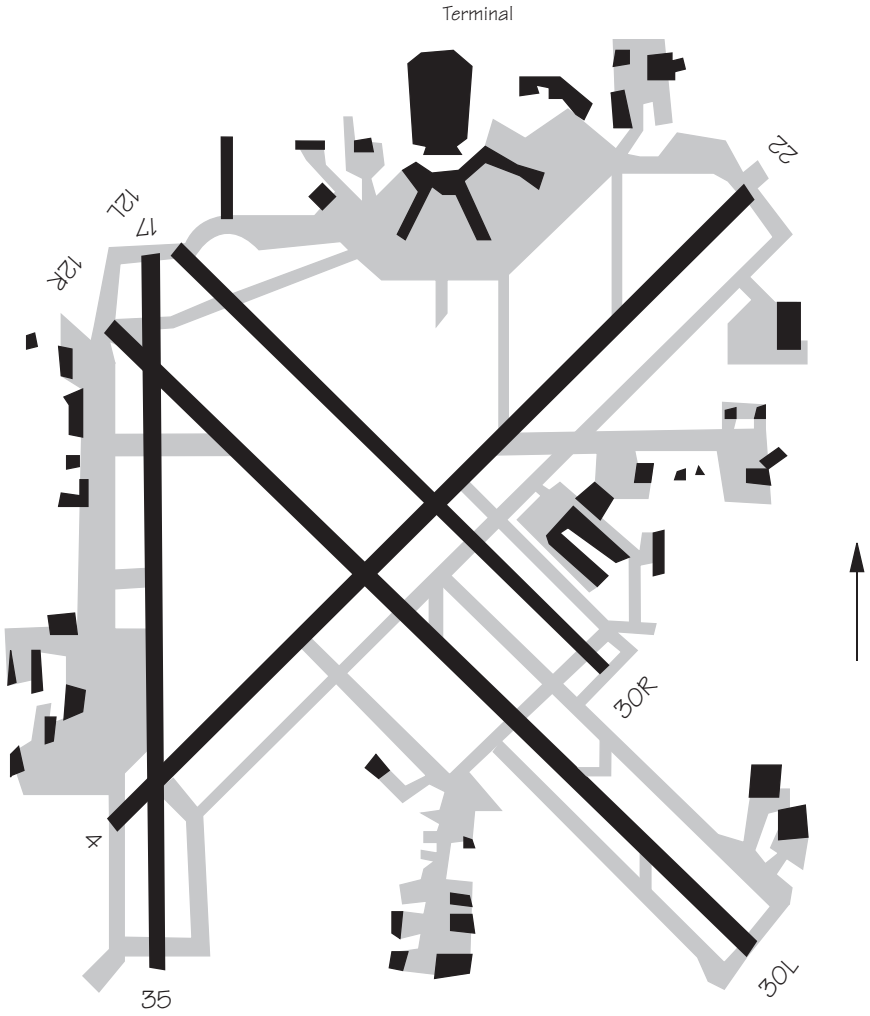
Extensions to both Runway 6L/24R and Runway 6R/24L are proposed. The 2,000 ft. extension to Runway 6L/24R has a proposed operational date of 2004. The 3,000 ft. extension to Runway 6R/24L has a proposed operational date of 2010. Both runway extensions are expected to cost $30 million each.



HNL — Honolulu International Airport

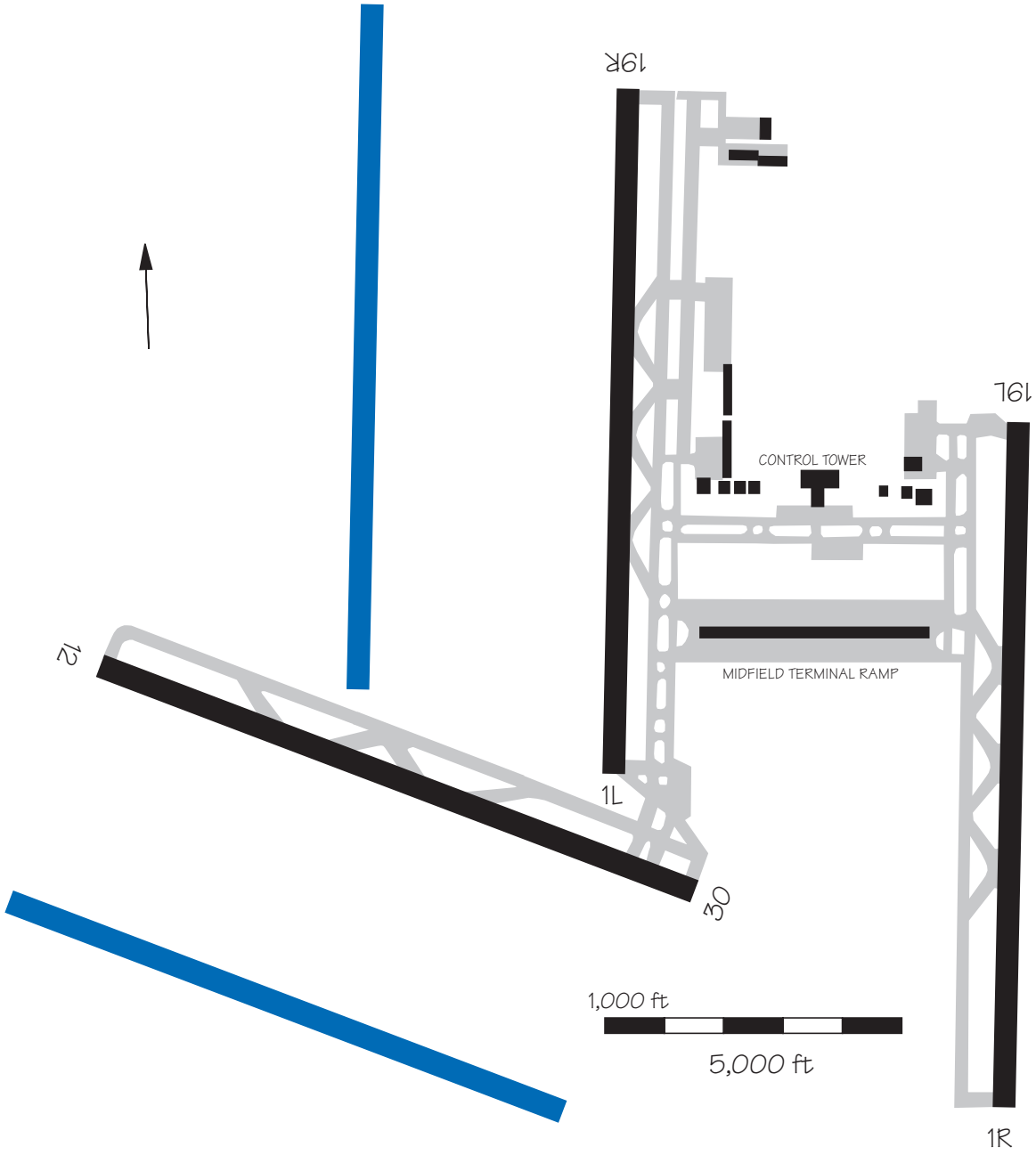


HOU — Houston William P. Hobby Airport



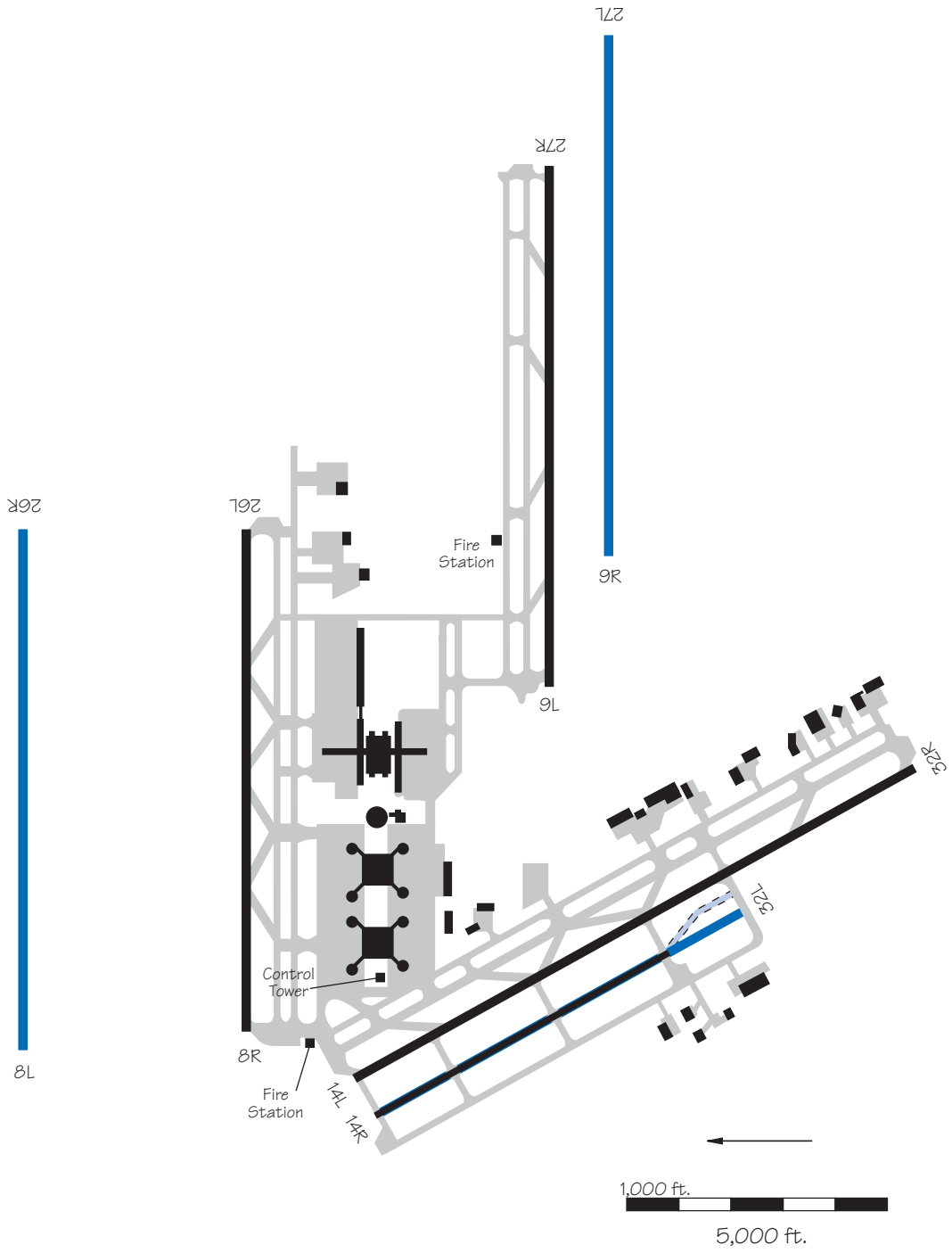
IAD — Washington Dulles International Airport

Two new parallel runways are under consideration. A north-south parallel, Runway 1W/19W, would be located 4,300 ft. west of the existing parallels and north of Runway 12/30. Estimated opening date is 2009. This could provide triple independent parallel approaches, if they are approved. A second parallel Runway 12R/30L has been proposed for location 4,300 ft. southwest of Runway 12/30. The runway is expected to be completed by 2010.



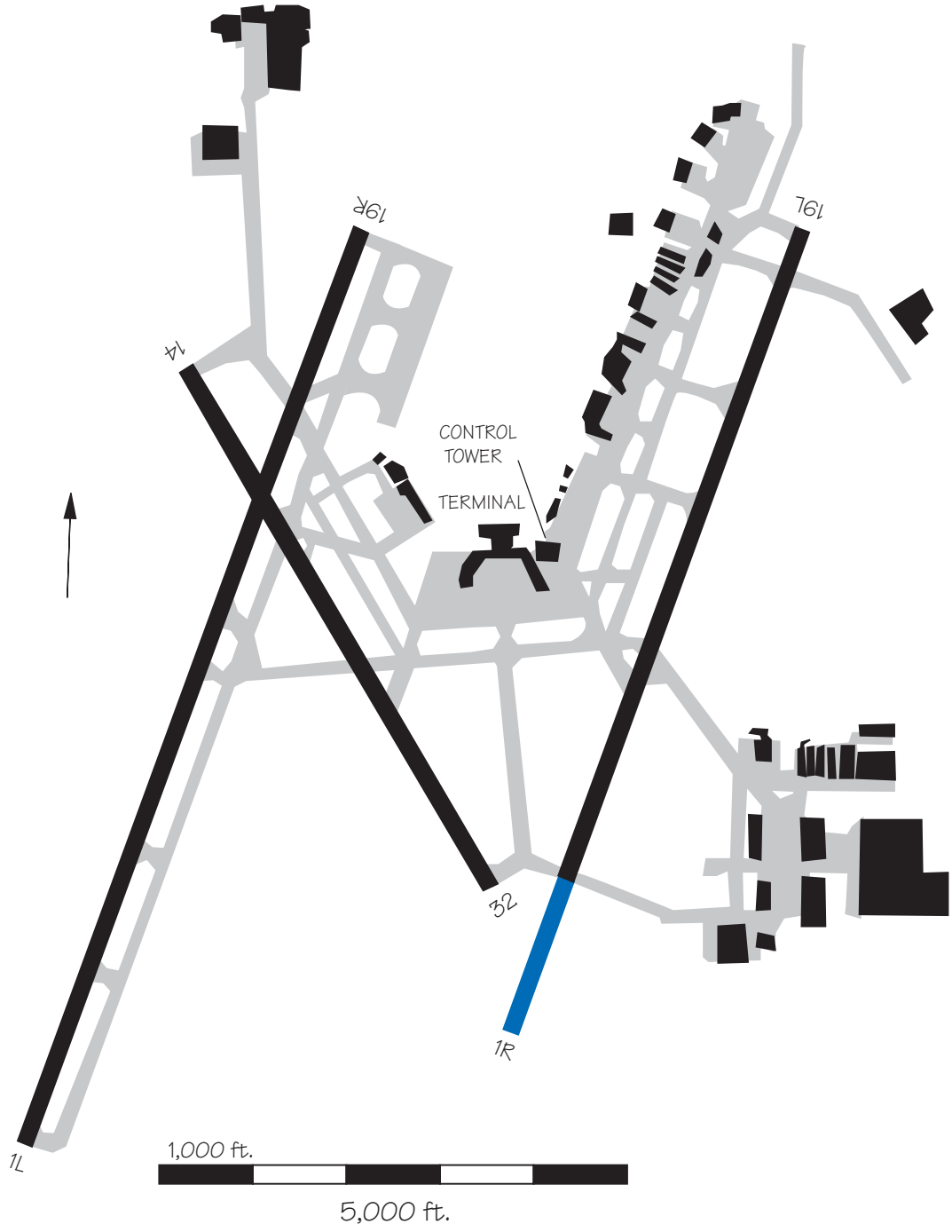
IAH — George Bush International Airport

An $8 million 2,000 ft. extension to Runway 14R/32L is planned for the year 2000. A new Runway 8L/26R is planned to be parallel to, and north of, the existing Runway 8/26. Commissioning is tentatively scheduled for the year 2002. Runway 8L/26R, in conjunction with Runways 9/27 and 8/26, has the potential to support triple IFR approaches, if approved. Another new runway, parallel to and south of Runway 9/27, is also planned in the distant future. Construction is expected to cost $95 million for Runway 8L/26R.



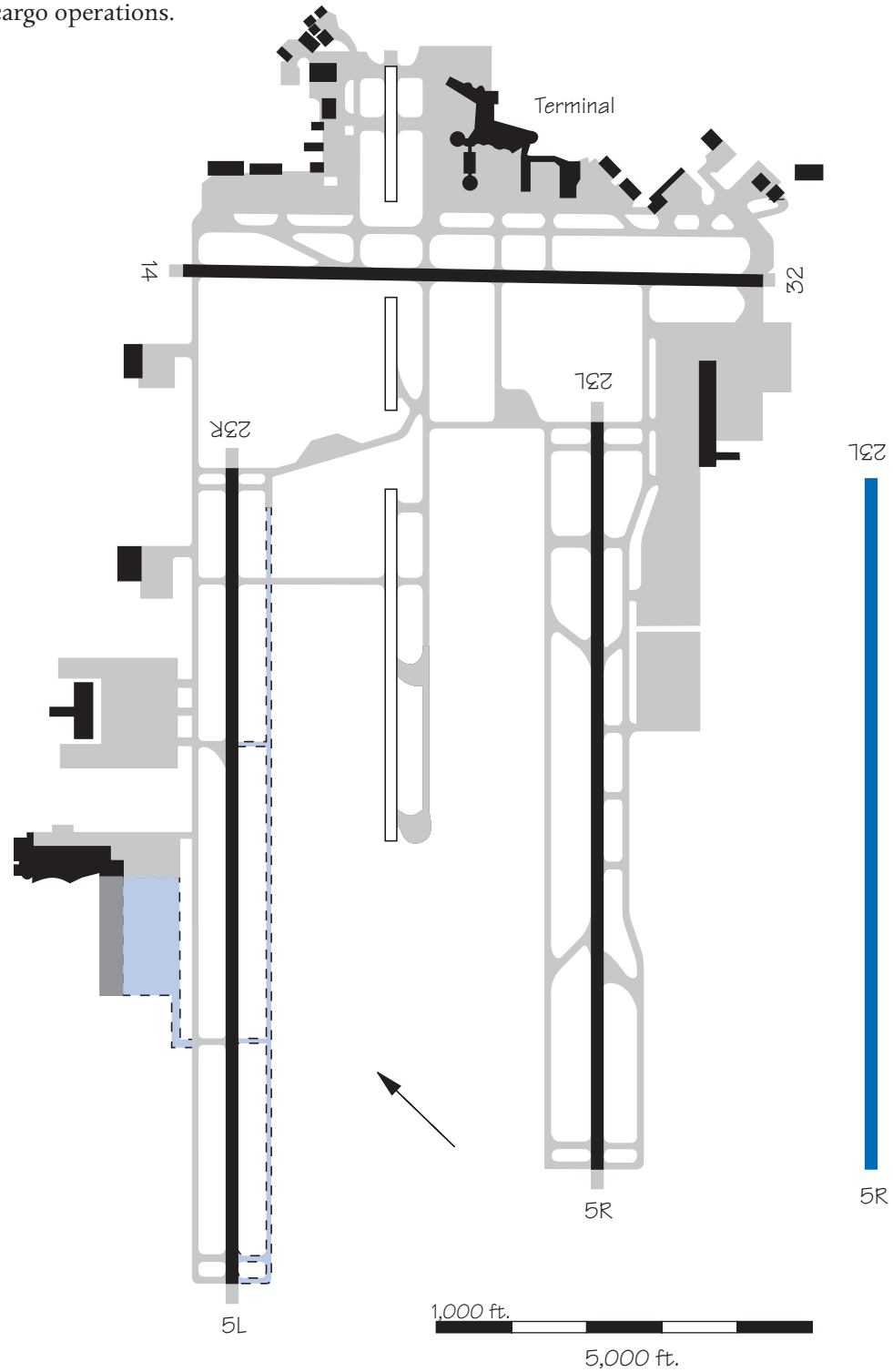
ICT — Wichita Mid-Continent Airport

A 1,700 ft. extension to Runway 1R/19L is proposed for possible expansion of cargo operations. This is not considered as a potential development through 2015.

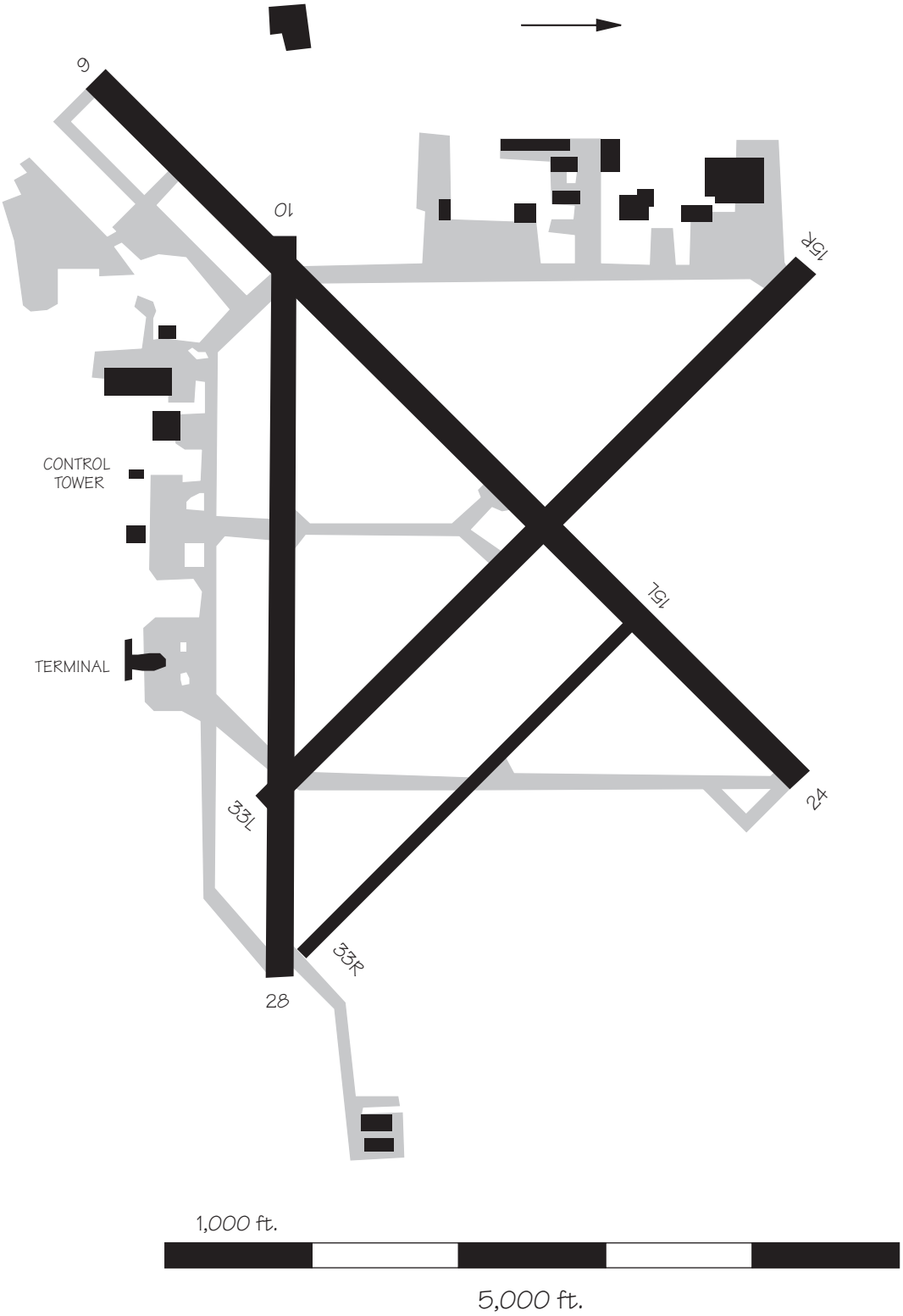


IND — Indianapolis International Airport

Construction of new Runway 5R/23L in 2008 will increase needed capacity and reduce anticipated air traffic delays. The runway will also facilitate increased air cargo operations.

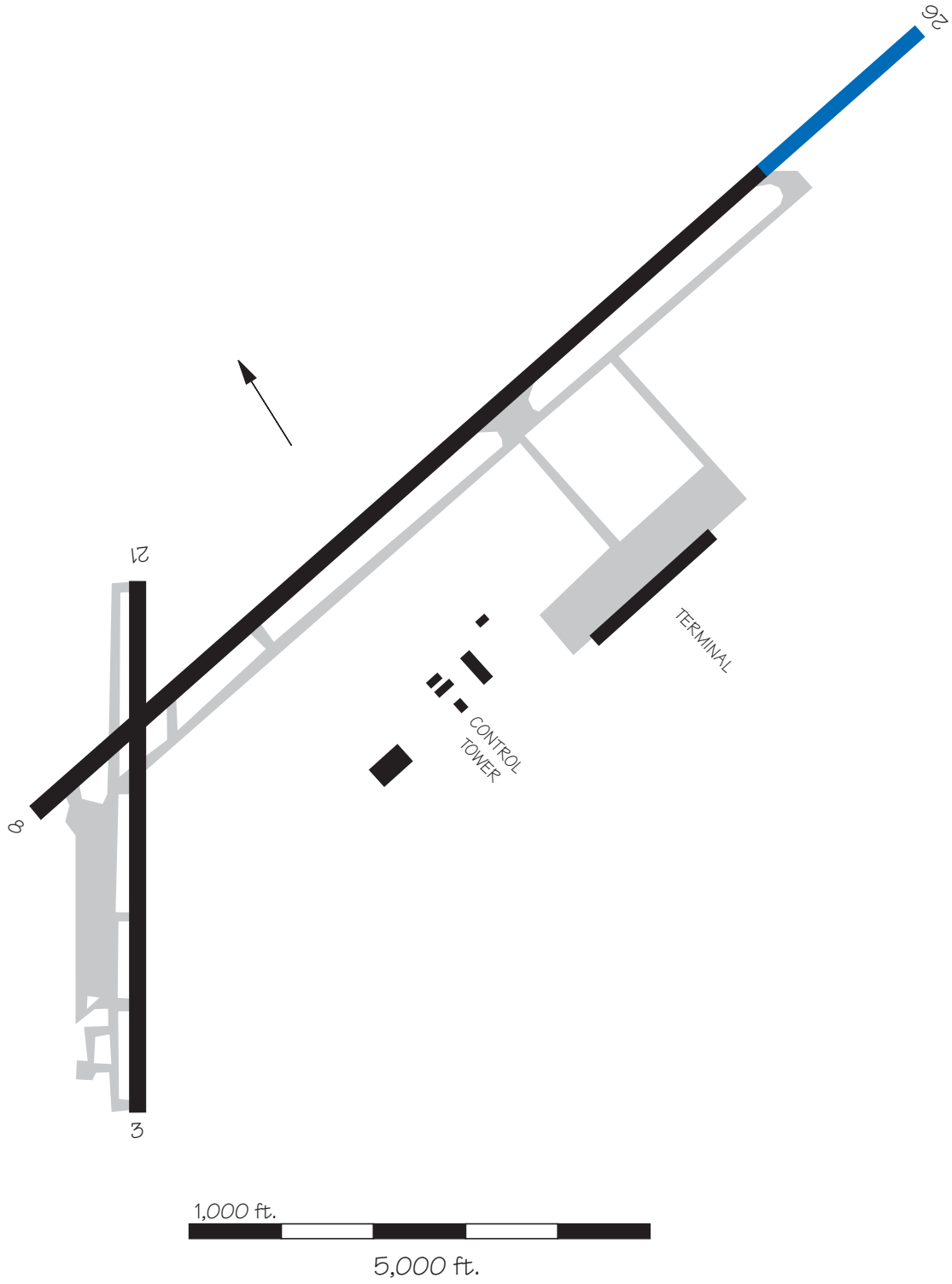


ISP — Islip Long Island Mac Arthur Airport



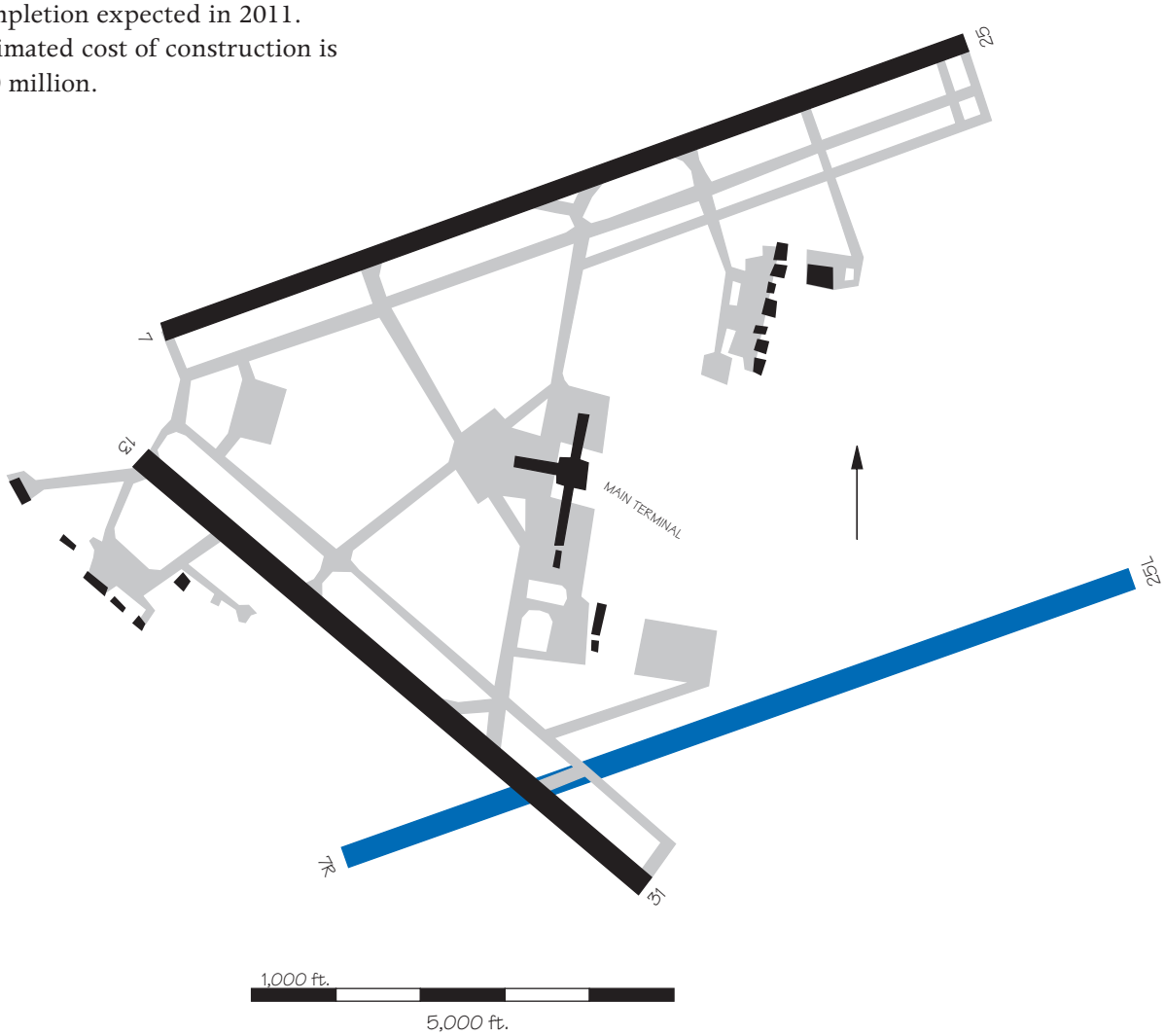
ITO — Hilo International Airport

A 2,200 ft. east extension of Runway 8/26 is proposed for development by 2010.

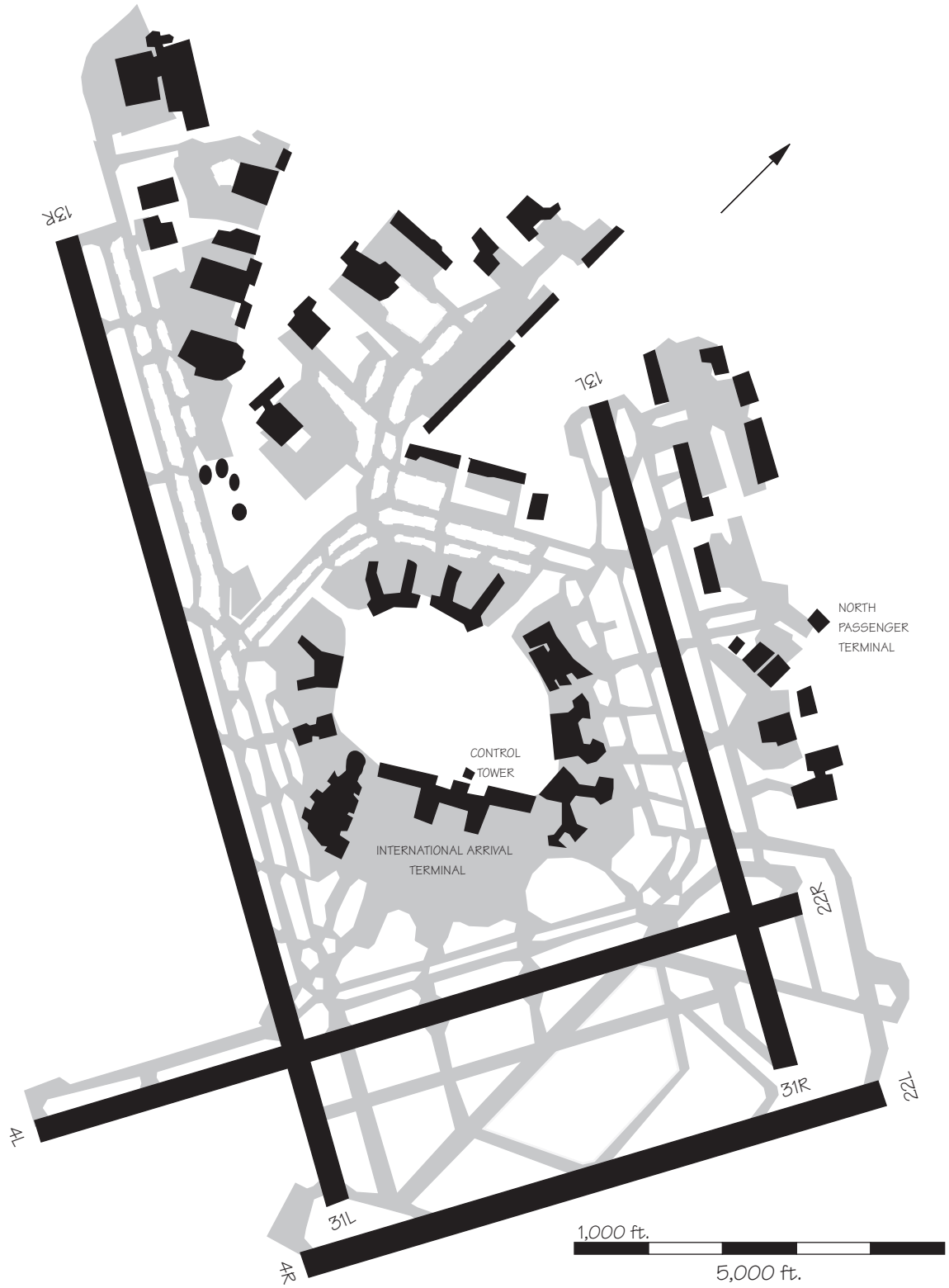


JAX — Jacksonville International Airport

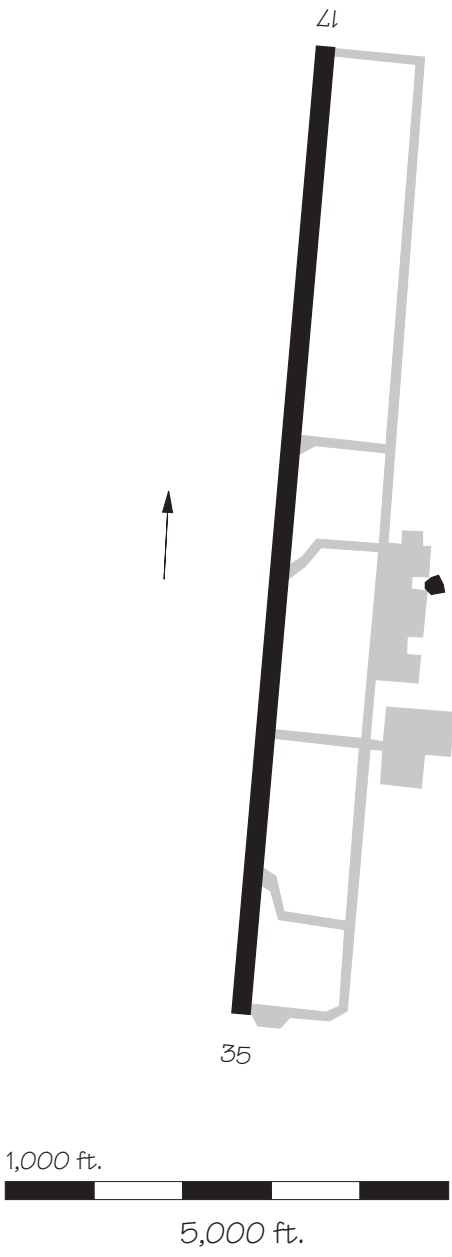
A new parallel Runway 7R/25L is being planned. It will be 6,500 ft. south of the existing Runway 7/25, permitting independent parallel IFR operations and potentially doubling Jacksonville's hourly IFR arrival capacity. Construction is scheduled to begin in 2010, with completion expected in 2011. Estimated cost of construction is $50 million.



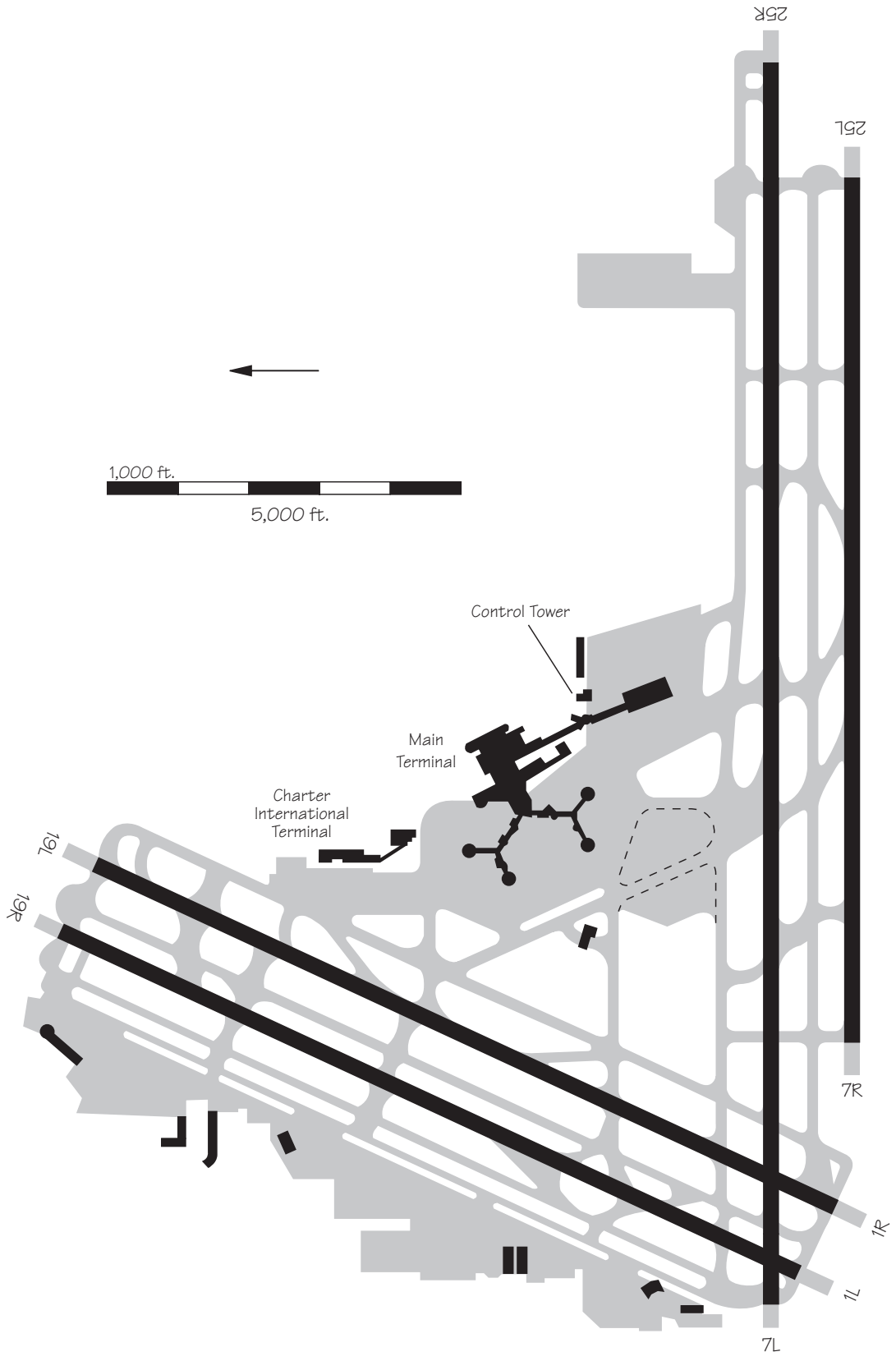
JFK — New York John F. Kennedy International Airport



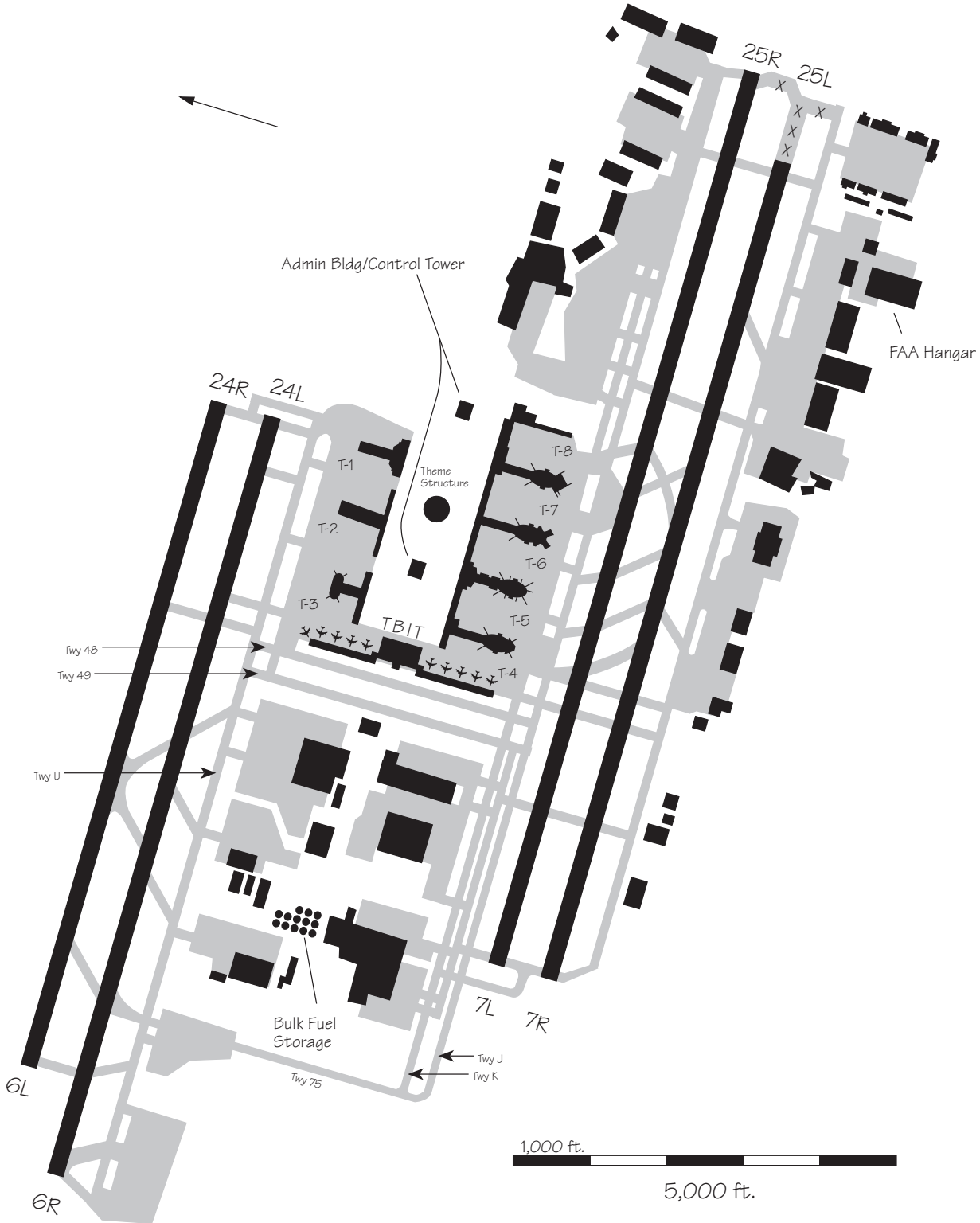
KOA — Kona International at Keahole



LAS — Las Vegas McCarran International Airport



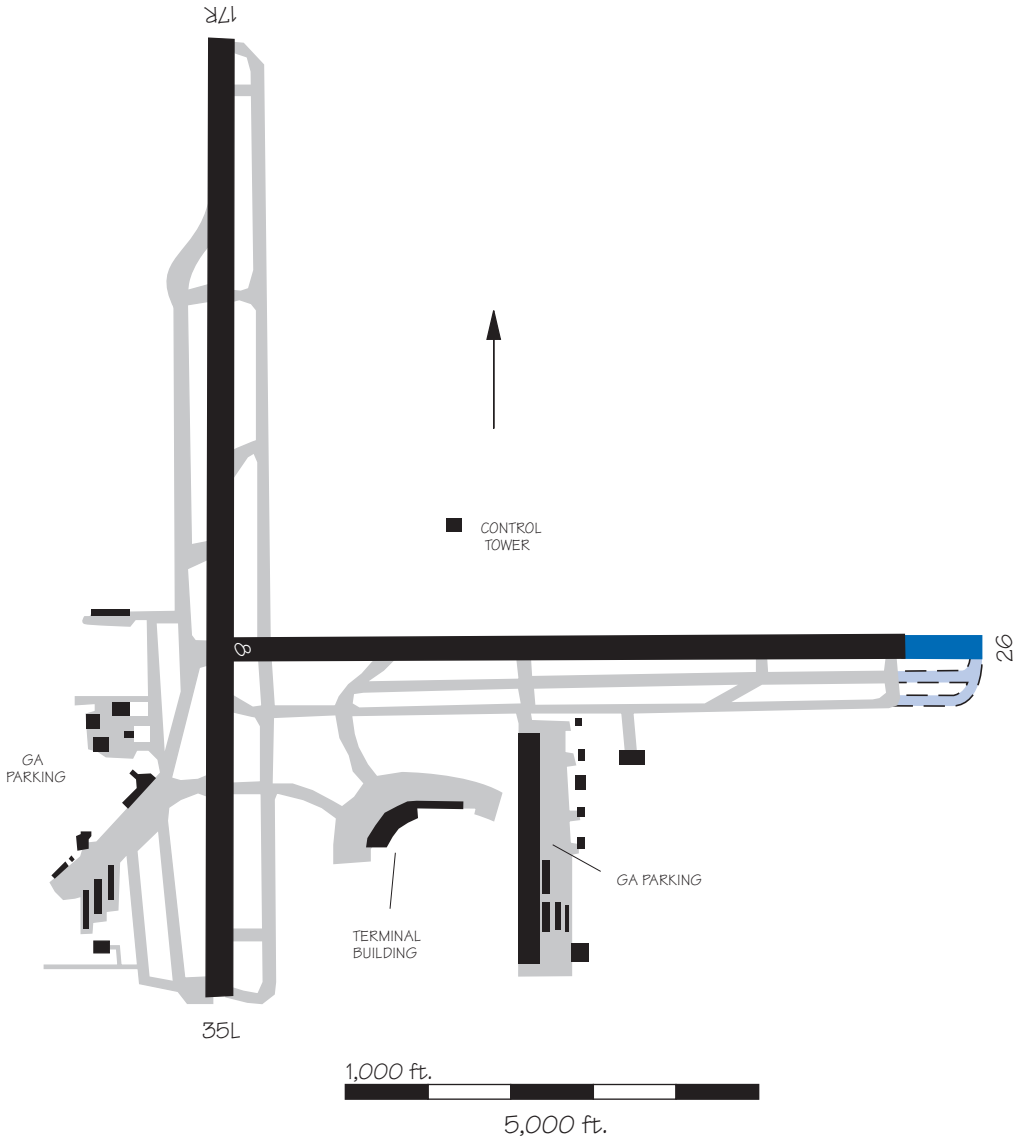
LAX — Los Angeles International Airport



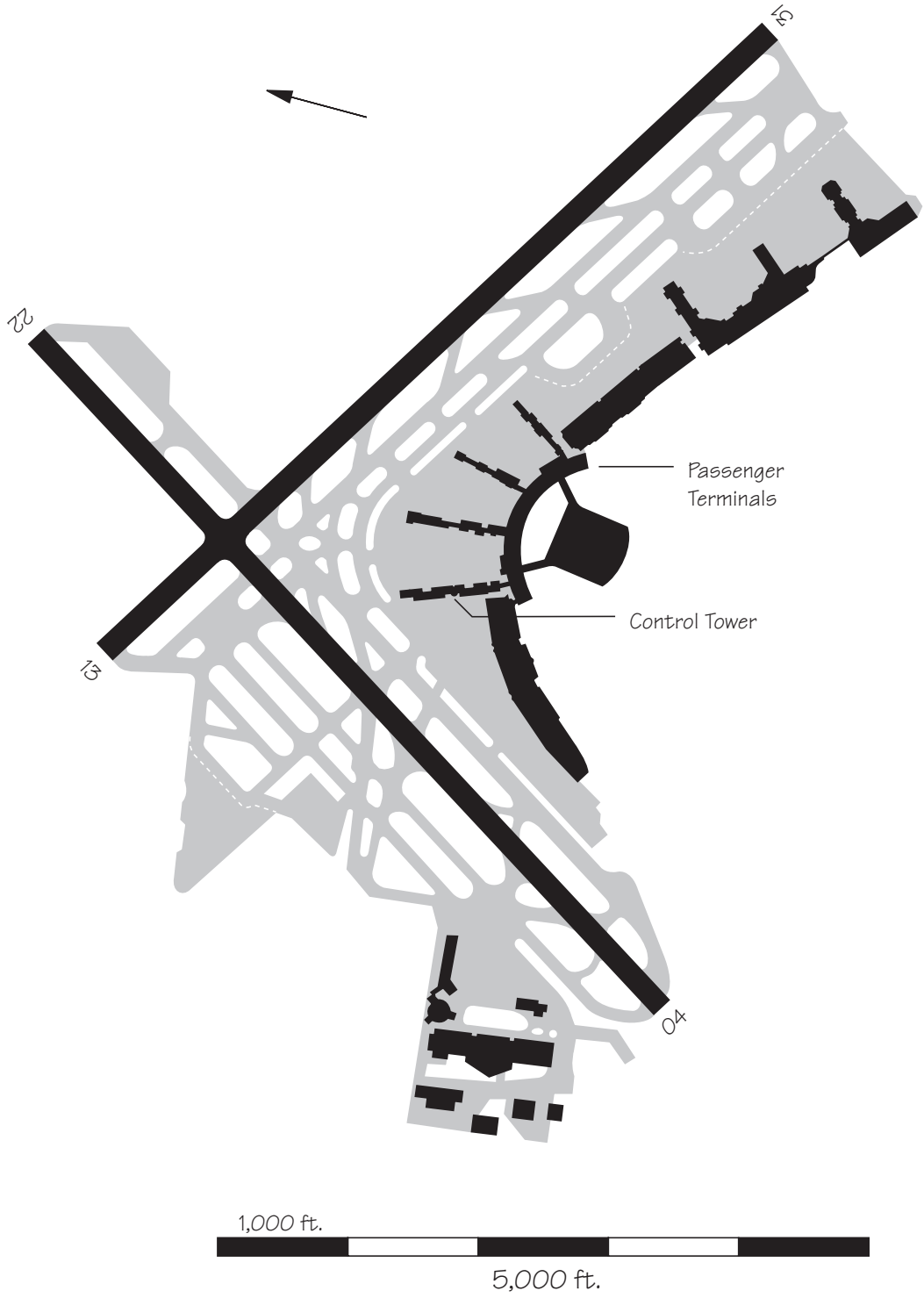
Note: Some buildings/structures have been removed for clarity.

LBB — Lubbock International Airport

An extension to Runway 8/26 is planned. The start of construction is scheduled for 2004 and the estimated cost is $5 million. It is anticipated that the extension will be operational in 2005.

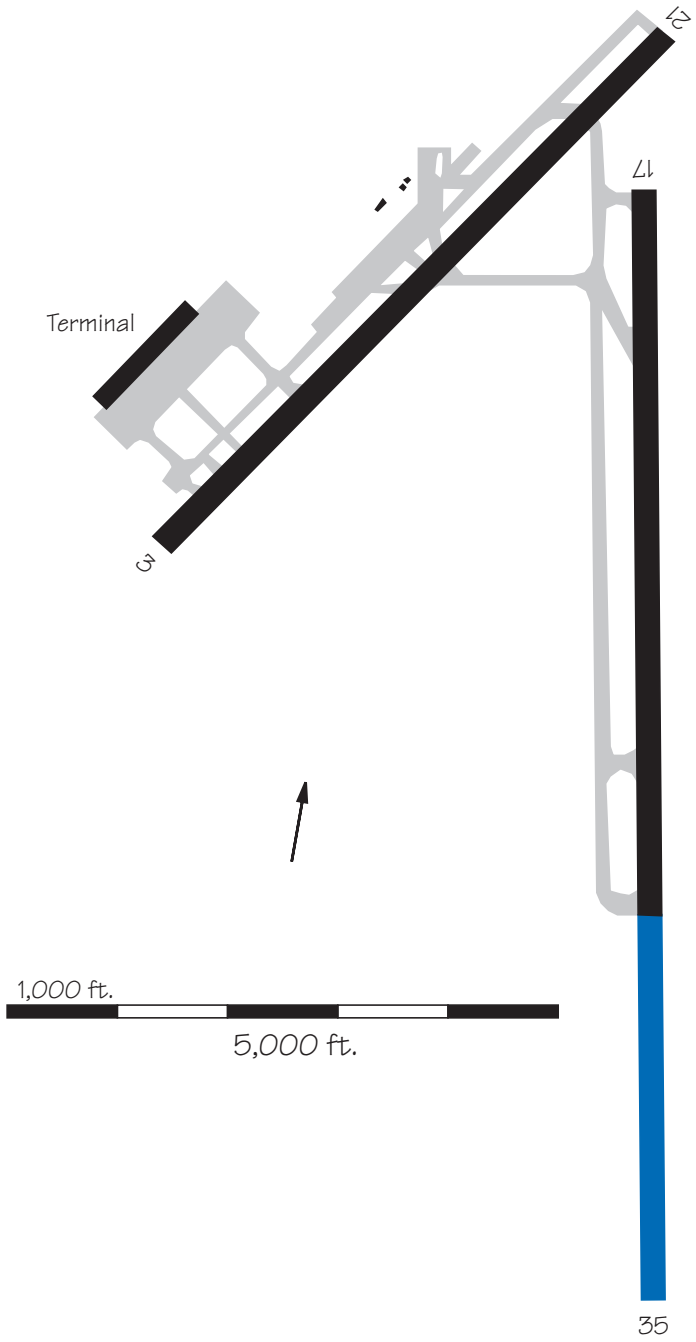


LGA — New York LaGuardia Airport



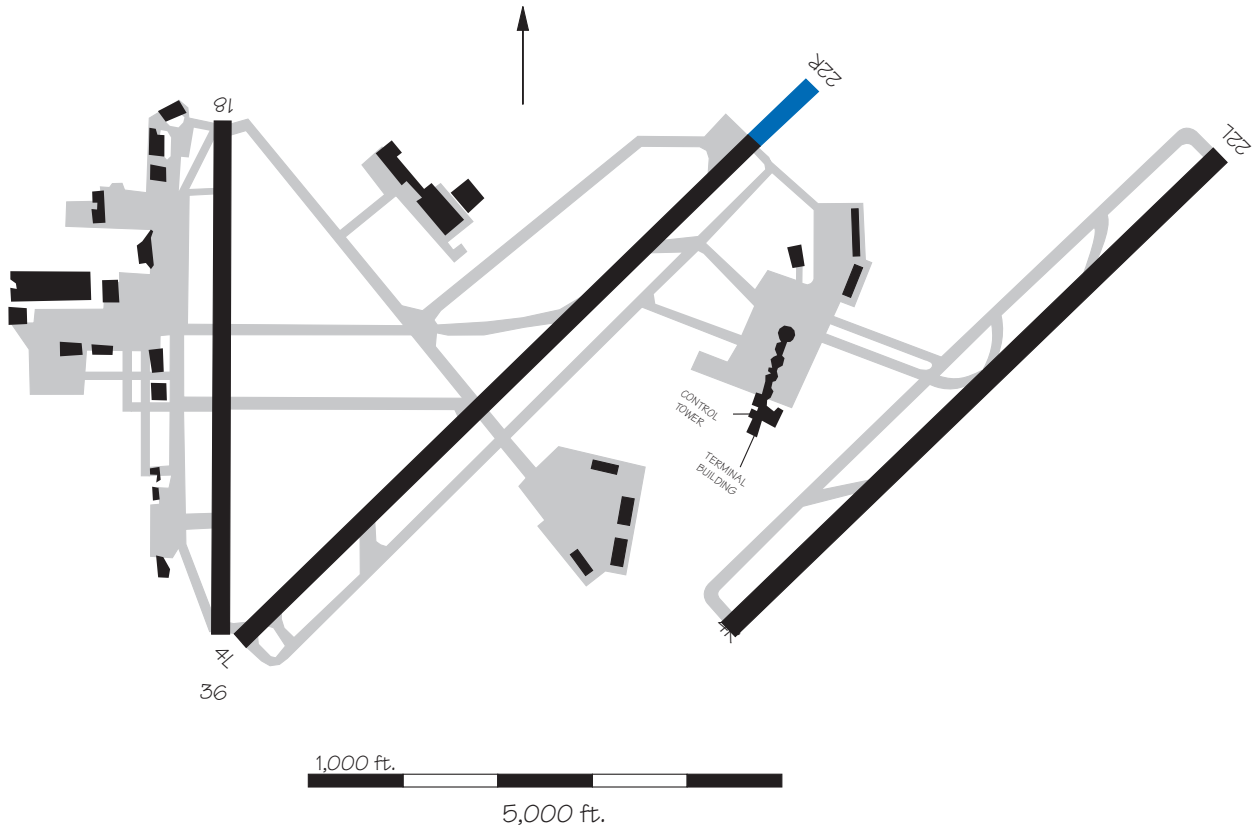
LIH — Lihue Airport

A 3,500 ft. extension of Runway 17/35 is proposed. Expected operational date is 2003, with an estimated project cost of $30 million.



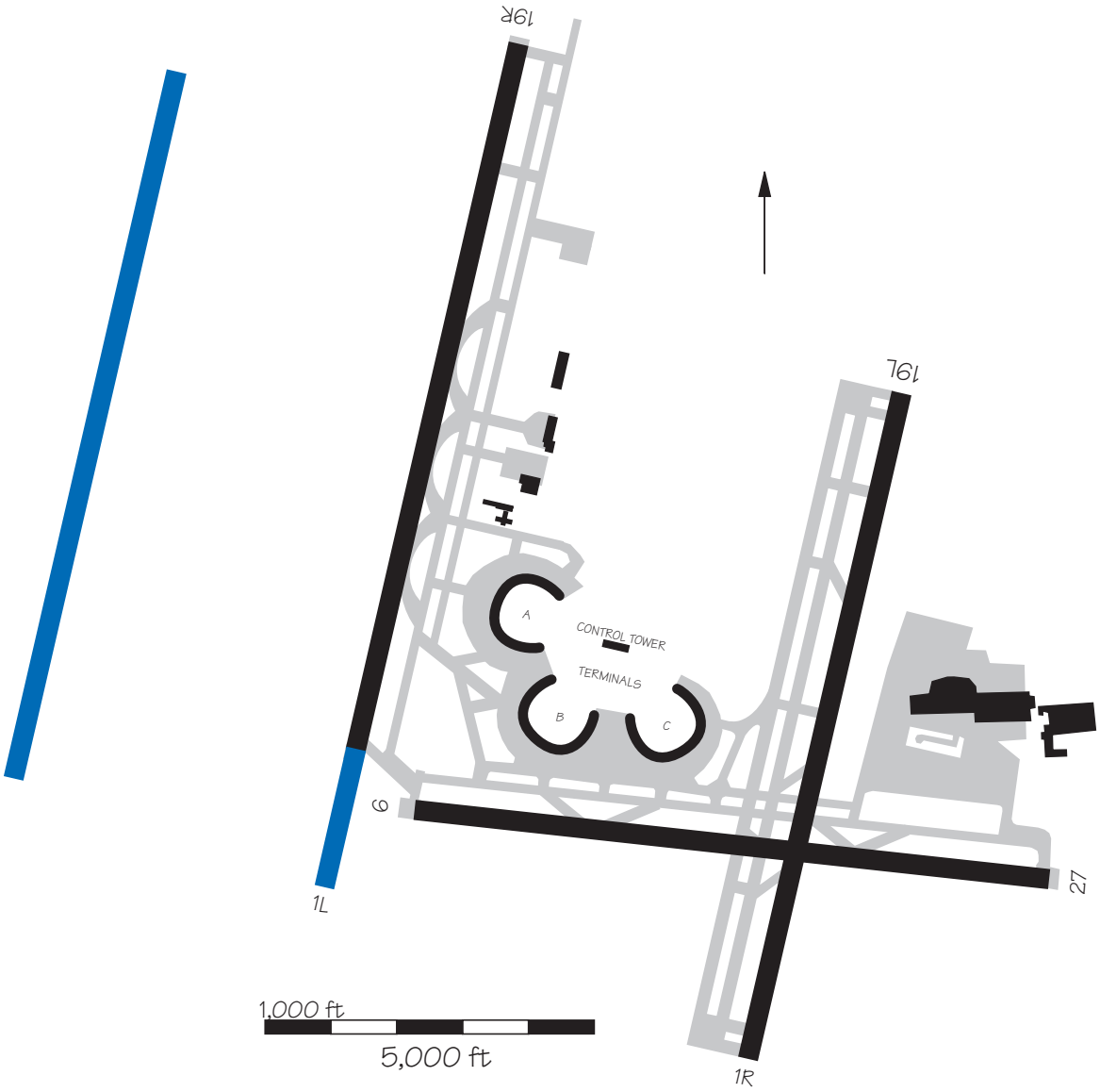
LIT — Little Rock Adams Field

An extension of Runway 4L/22R is underway, and should be operational in late 1998. The estimated cost of construction is $31 million.



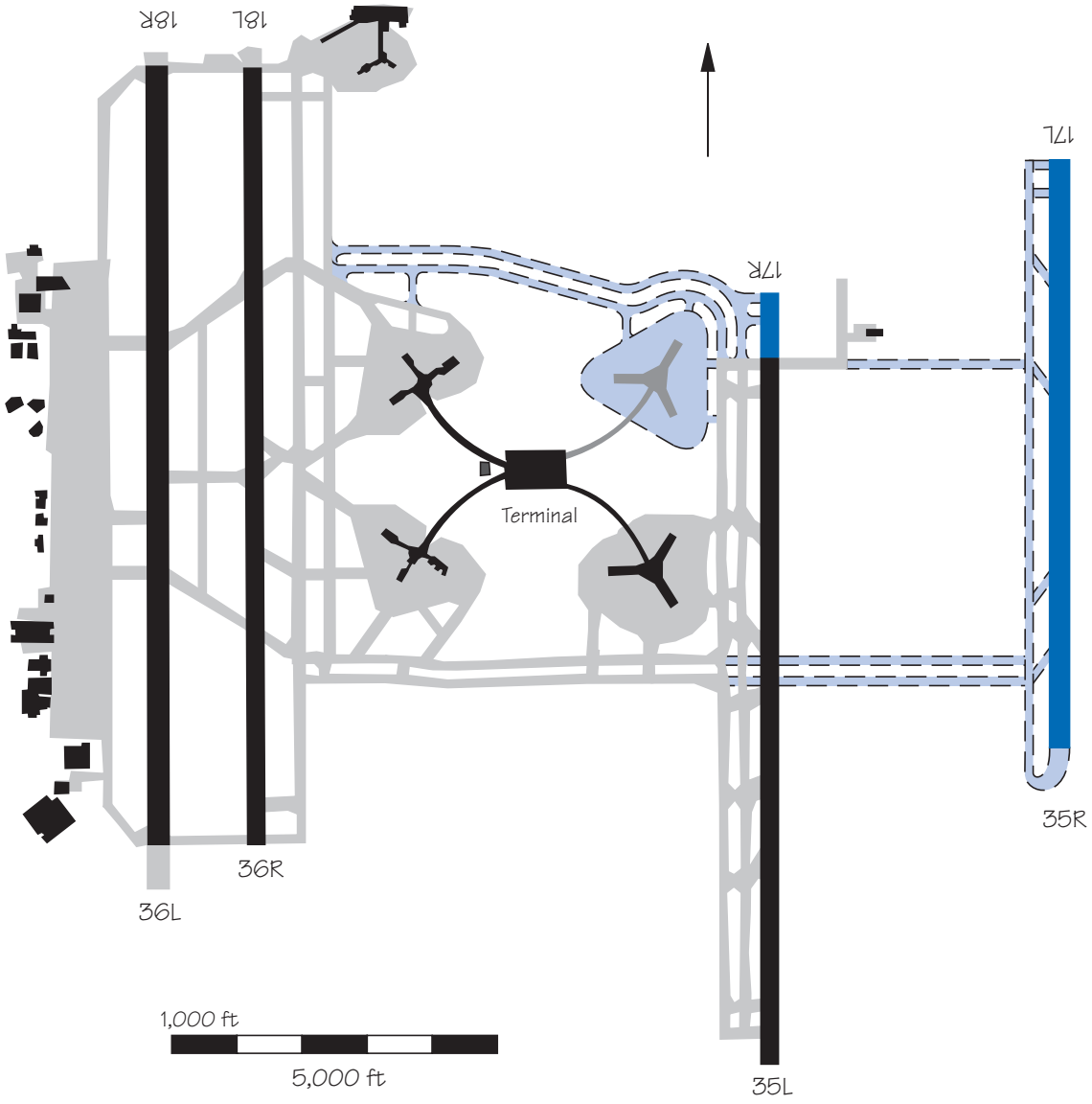
MCI — Kansas City International Airport

In accordance with the Airport Master Plan, an extension of Runway 1L/19R is currently planned. One additional parallel runway west of the existing north-south runway is being considered.

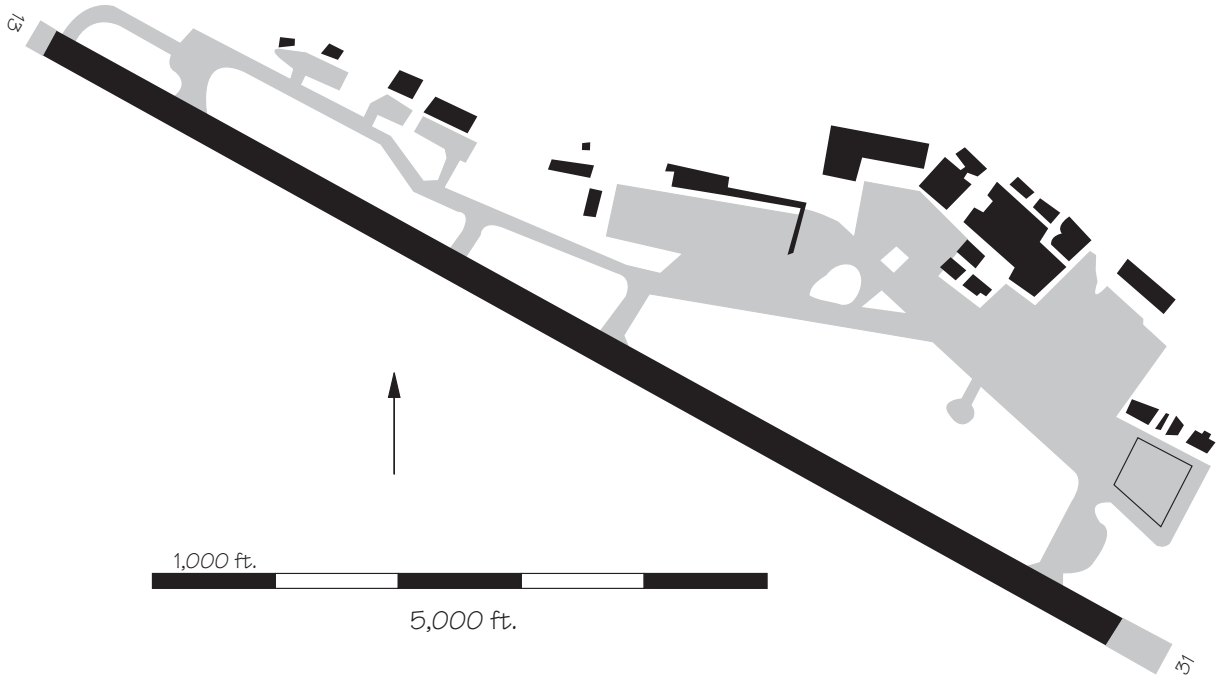


MCO — Orlando International Airport

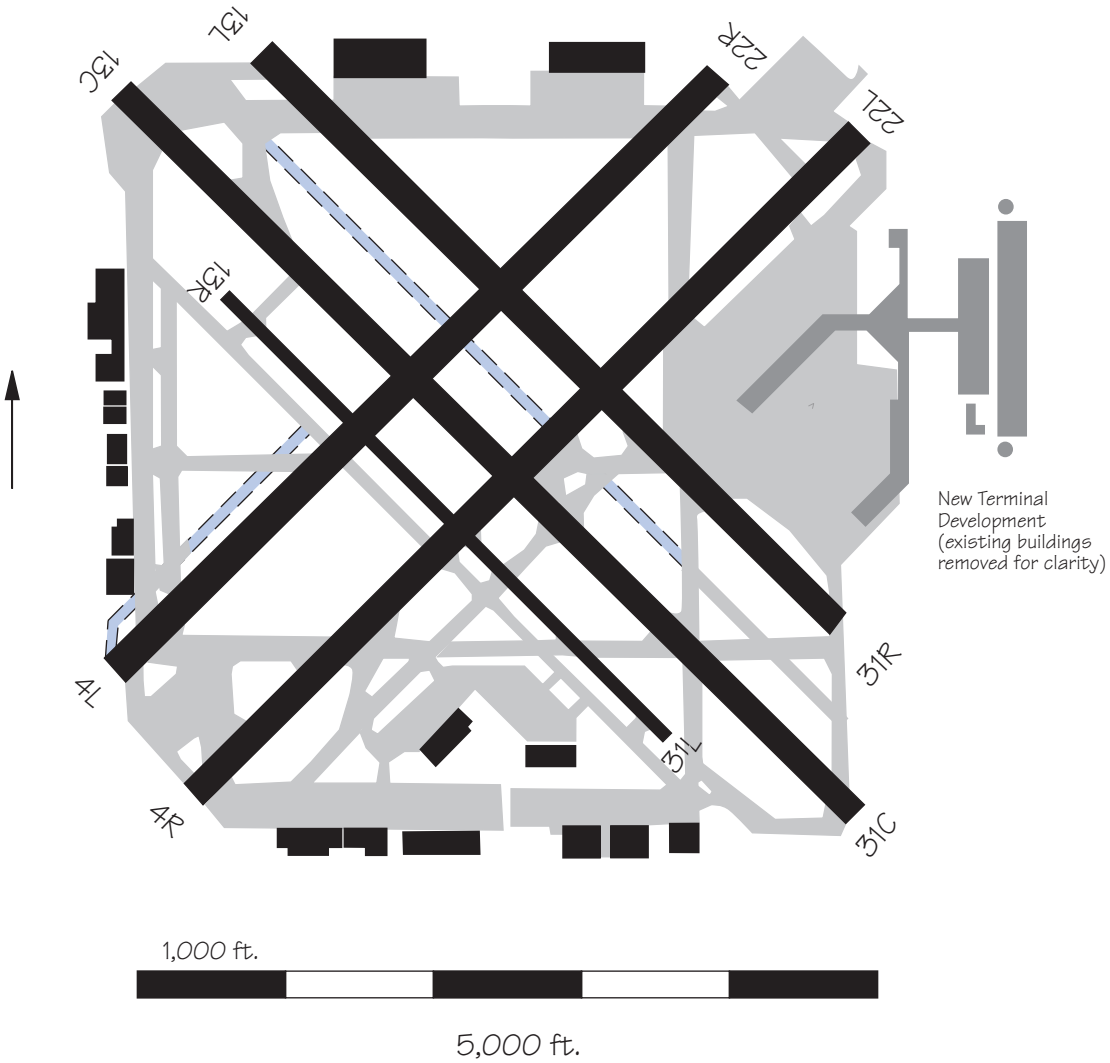
Environmental mitigation for a fourth north-south parallel runway, Runway 17L/35R, began October 10, 1990 and is ongoing. The runway is expected to be operational in 2002. It will be located 4,300 ft. east of Runway 17R/35L. This may permit triple independent IFR operations. The estimated cost of construction of this runway is $137 million. Also planned is a 1,000 ft. extension to Runway 17R/35L. This may prevent aircraft on the planned dual taxiway from obstructing the Runway 17R approach.



MDT — Harrisburg International Airport

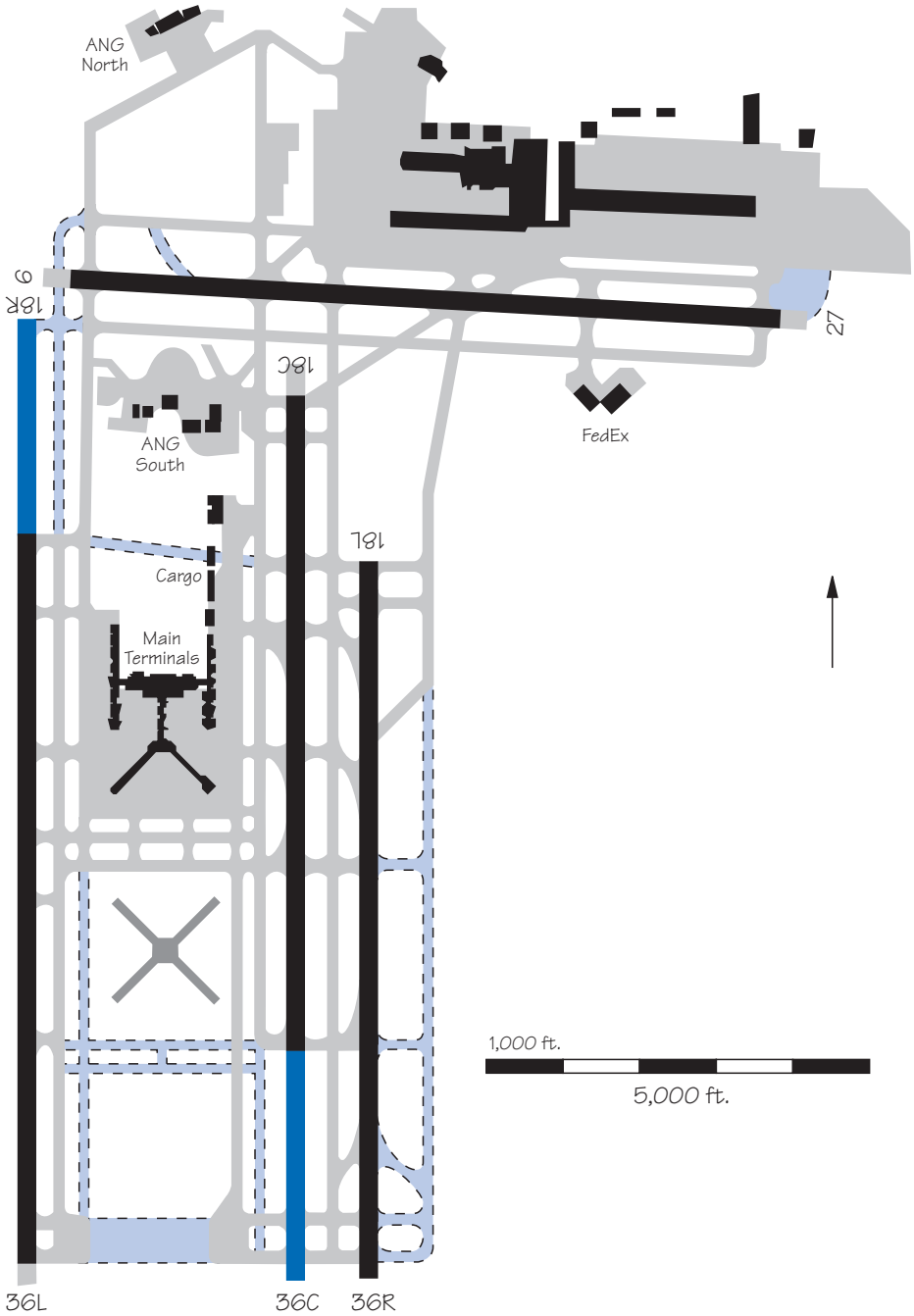


MDW — Chicago Midway Airport



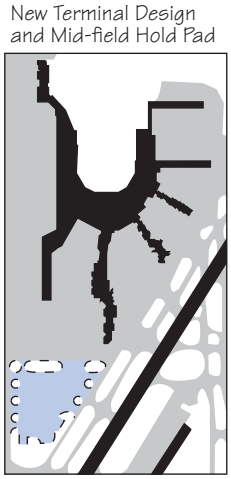
MEM — Memphis International Airport

A reconstruction and extension of Runway 18c/36c is under way. Construction is expected to be completed by 2000 at a cost of $103 million. The extended runway will allow departures by aircraft with heavier payloads and/or greater haul-lengths.



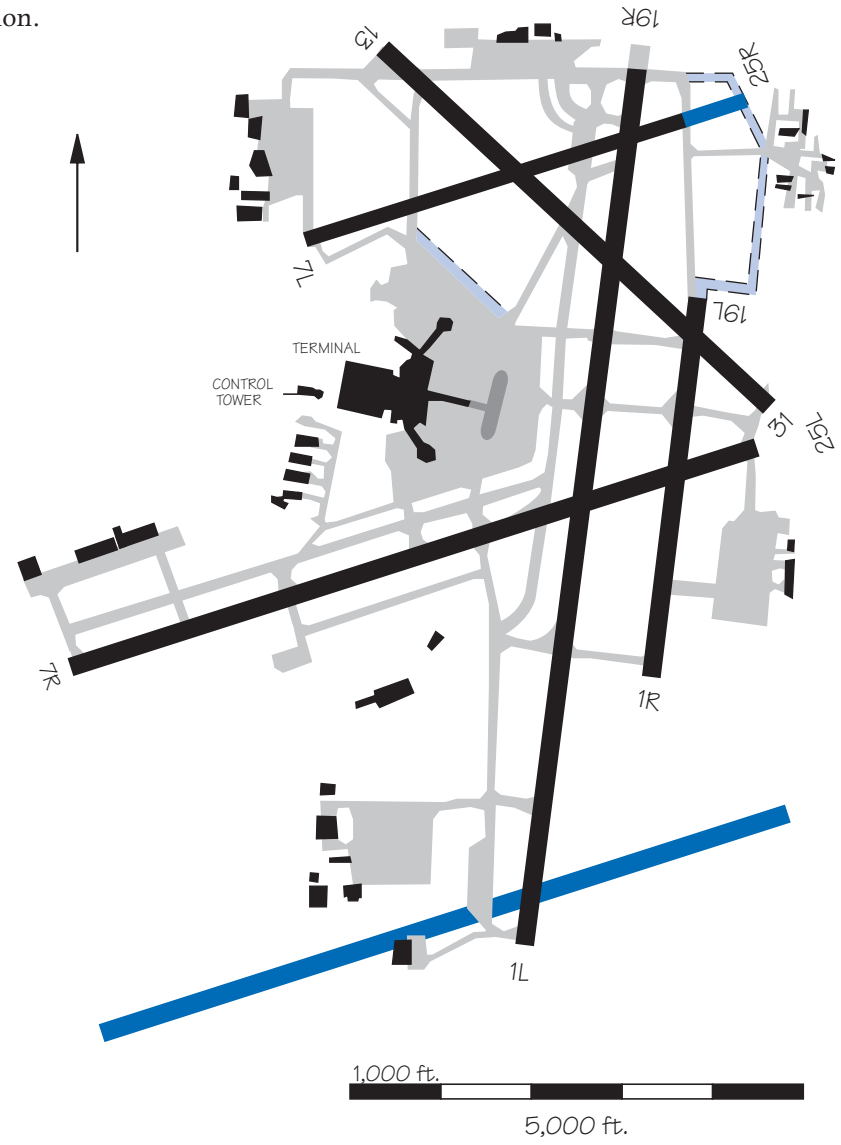
MIA — Miami International Airport

Construction of a new air carrier runway, 8,600 ft. long and 800 ft. north of existing Runway 9L/27R, is expected to start in 1999 and be completed by 2002. The estimated cost of construction is $180 million. An EIS is expected to be completed in late 1998. The new runway is planned for use primarily as an arrival runway in VFR and non-precision IFR conditions.



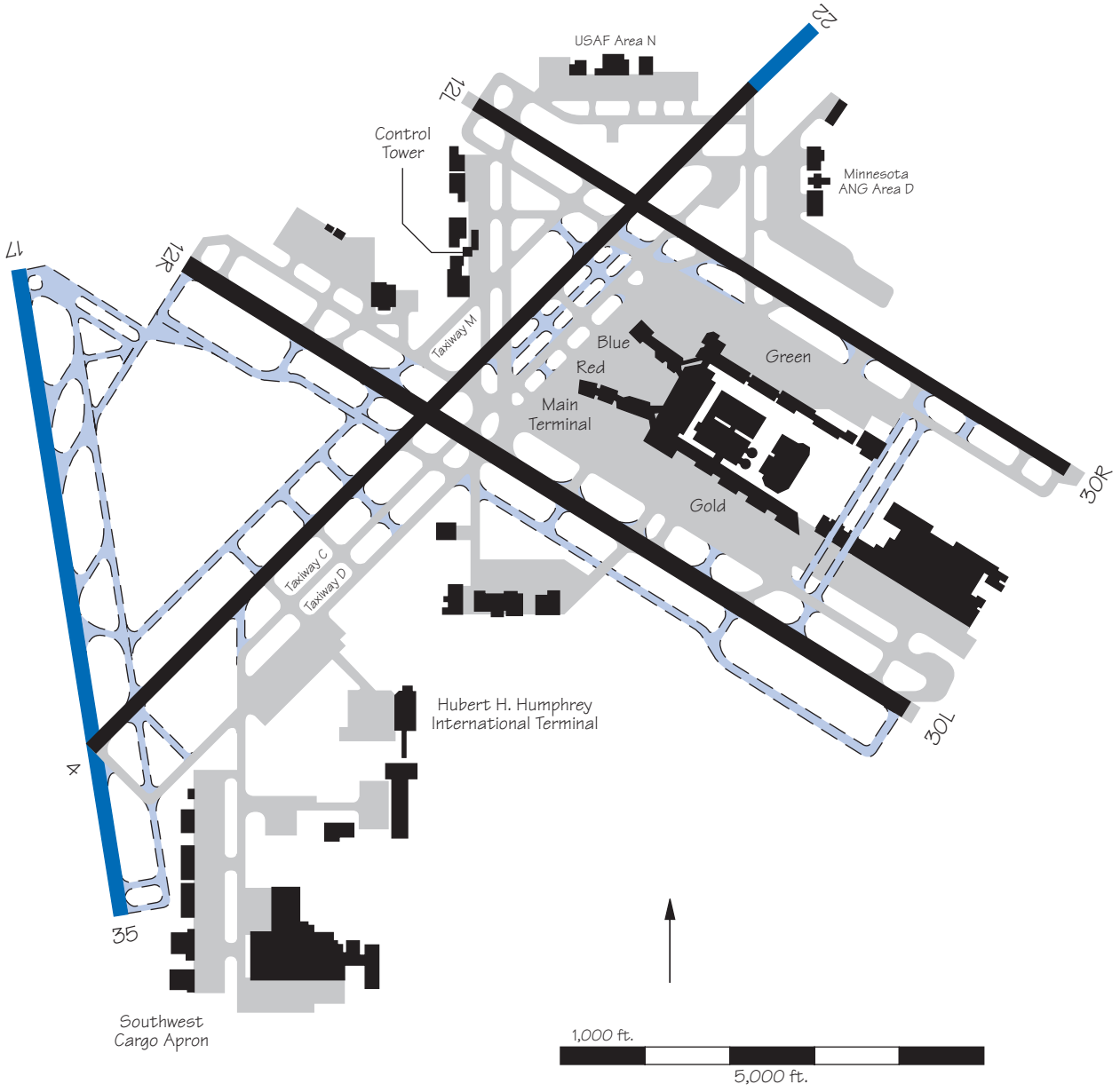
MKE — Milwaukee General Mitchell International Airport

A 700 ft. extension to Runway 7L/25R is to be completed in the summer of 1999. Extension of this runway from 4,100 ft. to 4,800 ft. will accommodate commuter aircraft and delay the need for a third parallel runway until about the year 2015. Anticipated cost of the runway extension is approximately $1.9 million.



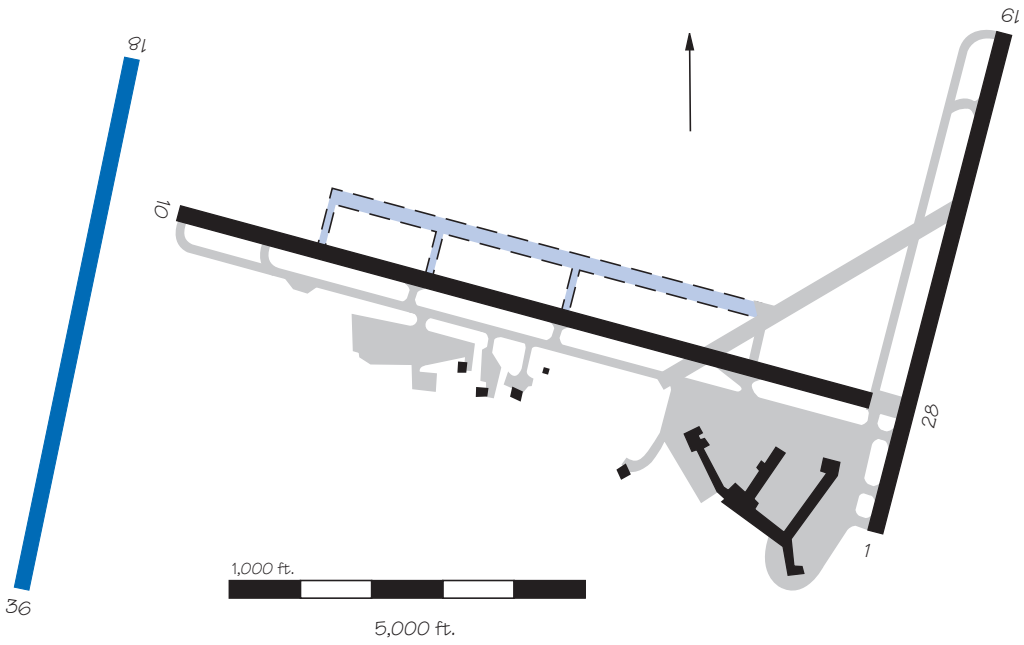
MSP — Minneapolis-St. Paul International Airport

Construction of the proposed 8,000 ft. Runway 17/35, at a cost of $175 million, will reduce the projected 2020 annual delay cost from $66 million to $38 million. The runway is expected to be operational in 2003 and will be used primarily for departures to the south and arrivals to the north. Construction of a 1,000 ft. extension to the northeast end of Runway 4/22, at a cost of $10 million, is planned to enhance non-stop flights to Hong Kong. The extension is to be operational in late 2000.

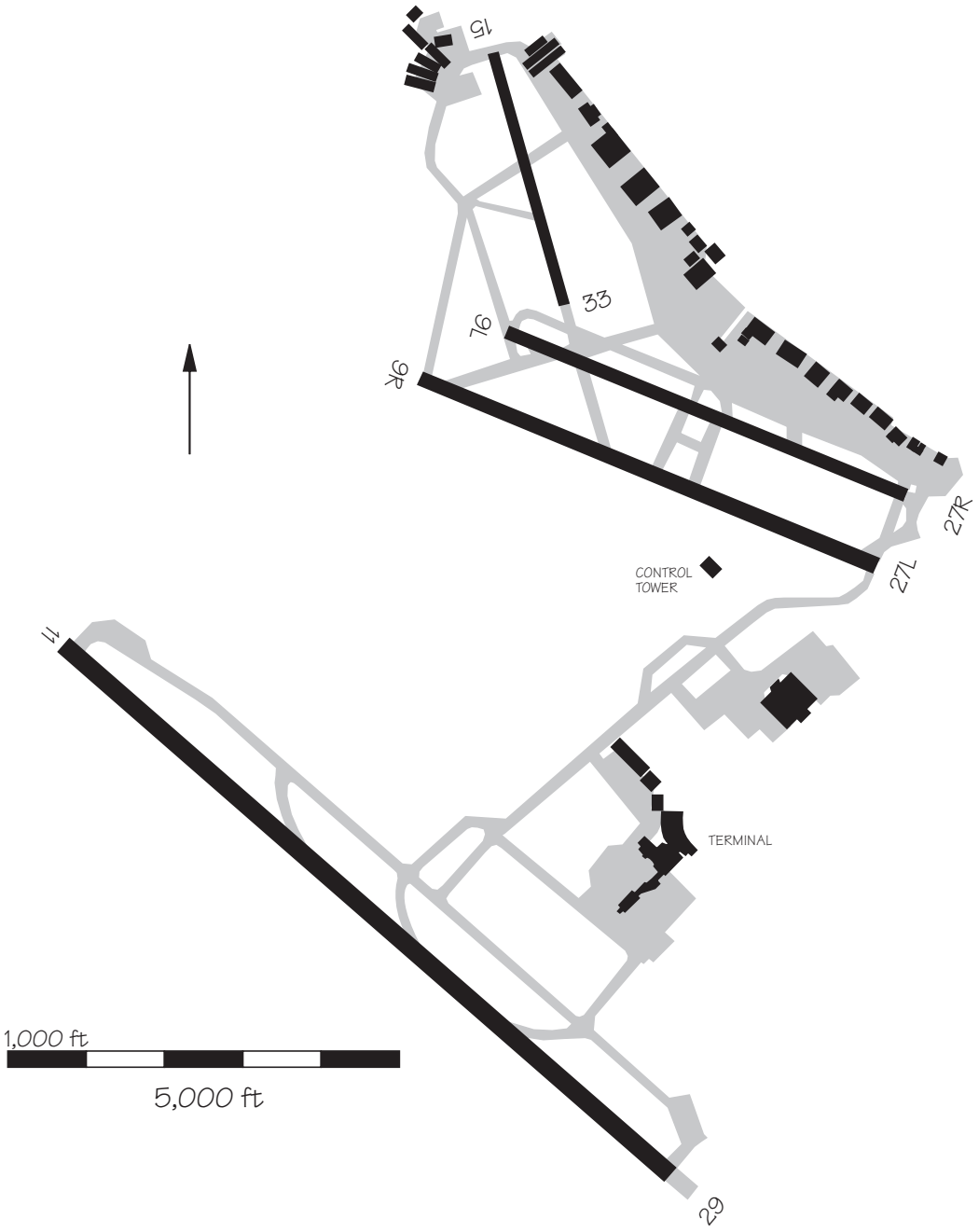


MSY — New Orleans International Airport

A new north-south runway, Runway 18/36, is planned. This new runway will be near parallel to the existing Runway 1/19 and will be located west of the threshold of Runway 10, approximately 11,000 ft. away from Runway 1/19. Pending environmental findings and funding availability, it is expected that the runway will be completed around 2010.

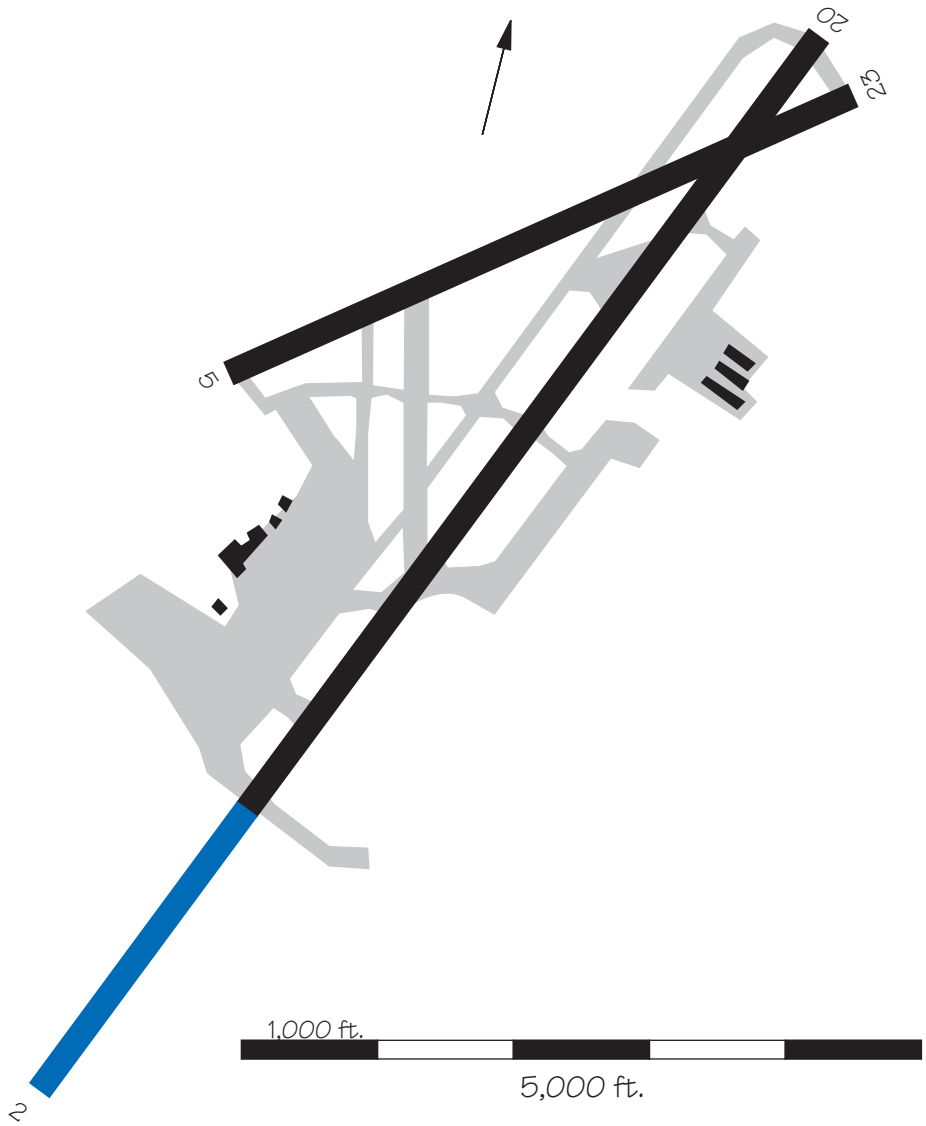


OAK — Metropolitan Oakland International Airport



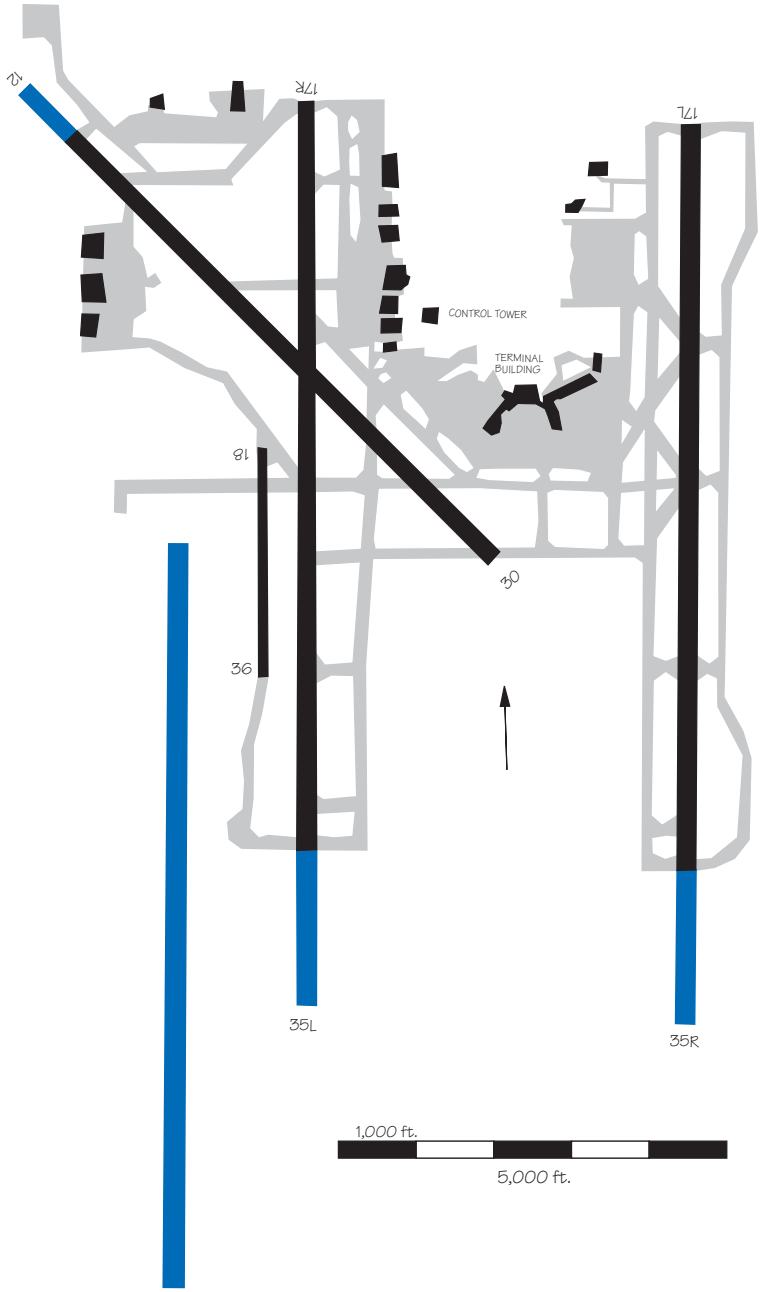
OGG — Kahului Airport

An extension of Runway 2/20 is being planned. An EIS is underway, and the extension could be operational by 2001, at a cost of $47 million.



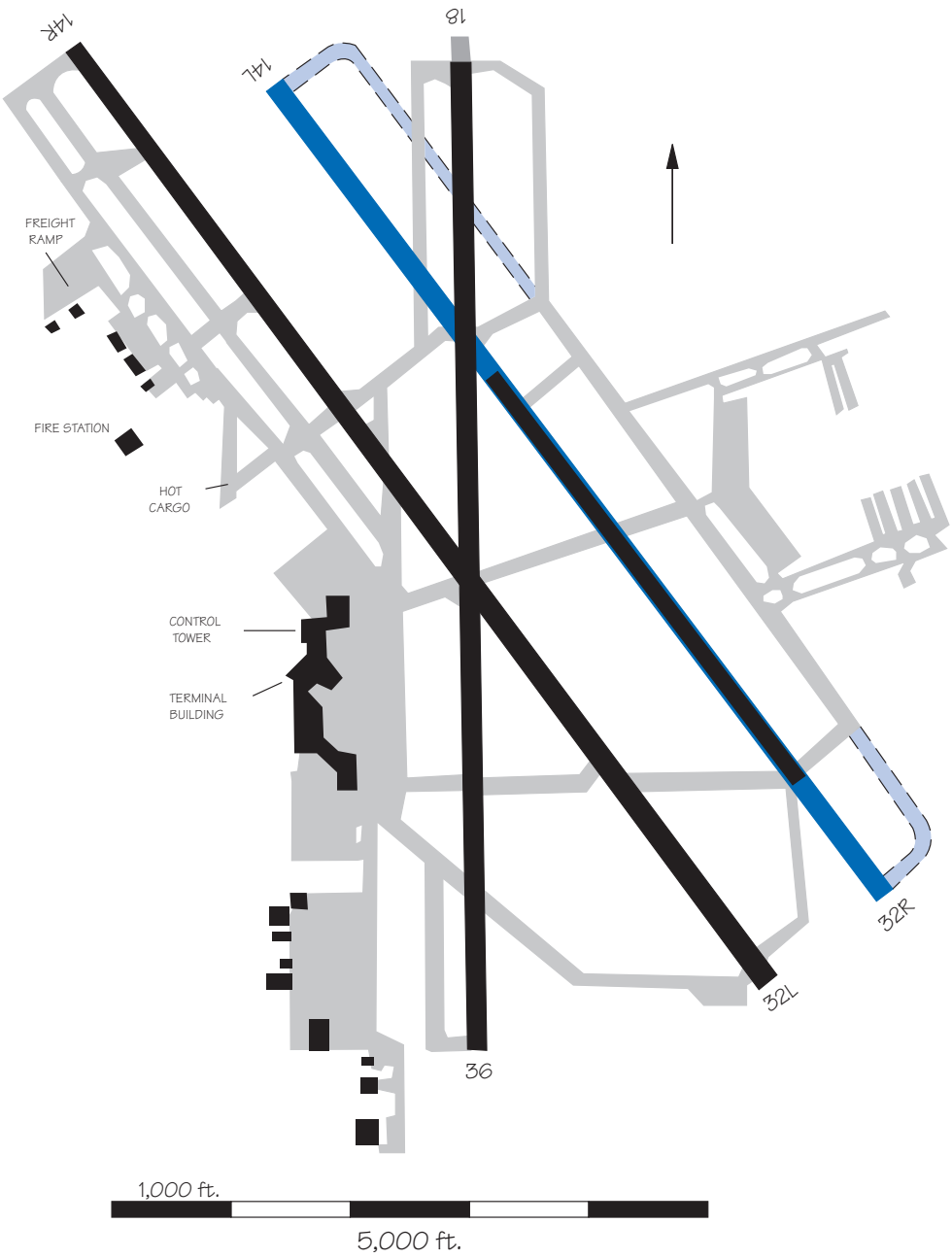
OKC — Oklahoma City Will Rogers World Airport

Construction of a new west parallel runway 1,600 ft. west of Runway 17R/35L is planned to be operational by 2012. Estimated cost of construction is $13 million. Extensions to both north/south runways, Runways 17L/35R and 17R/35L, are also planned. The estimated cost of extending the runways is $8 million each. Construction of the extension to Runway 17R/35L is expected to start in 2010 and be completed by 2014. A 1,200 ft. extension to the northwest of Runway 13/31 is planned as well. Construction is slated to begin in 2003, be completed in 2005, and cost $5 million.

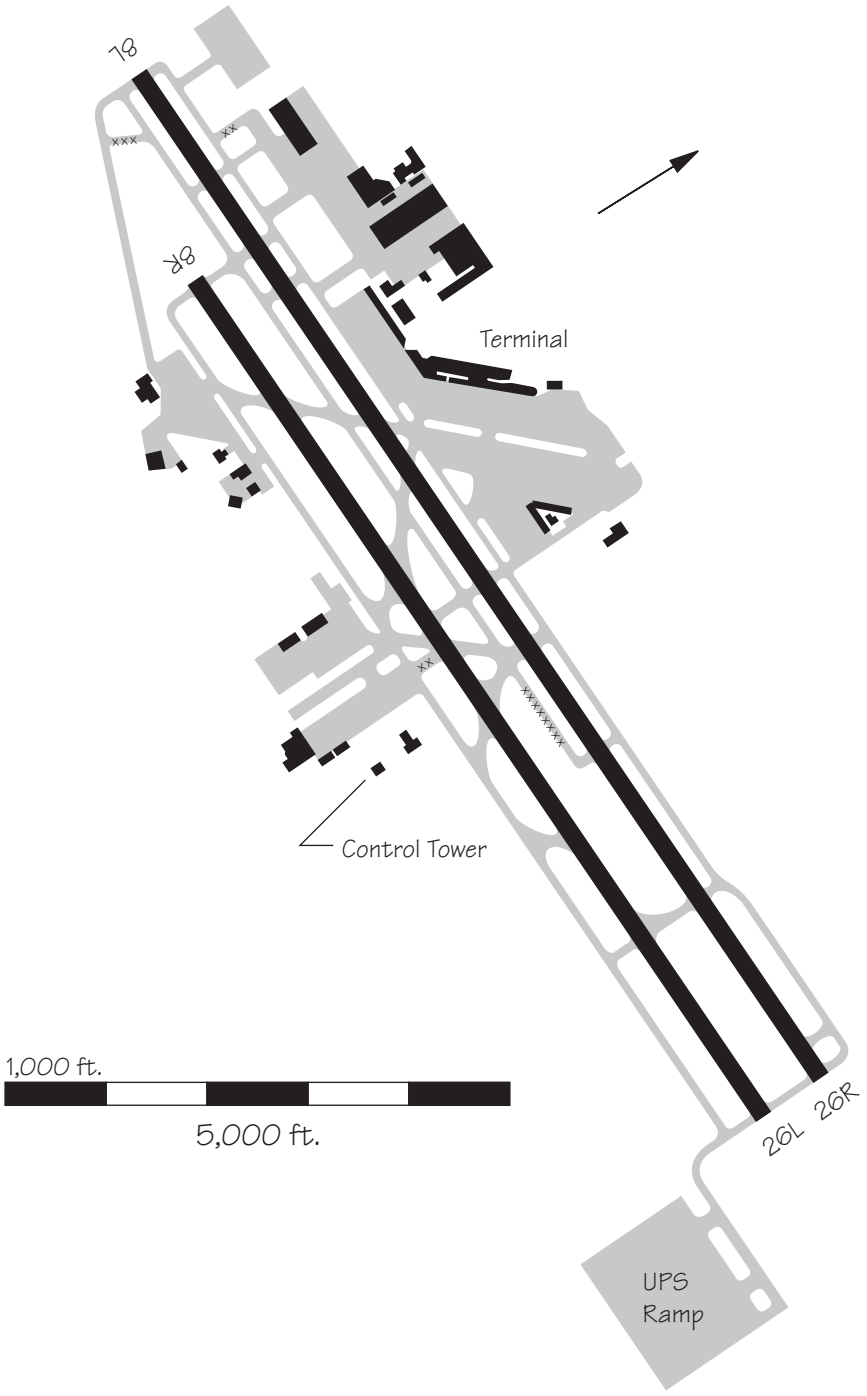


OMA — Omaha Eppley Airfield

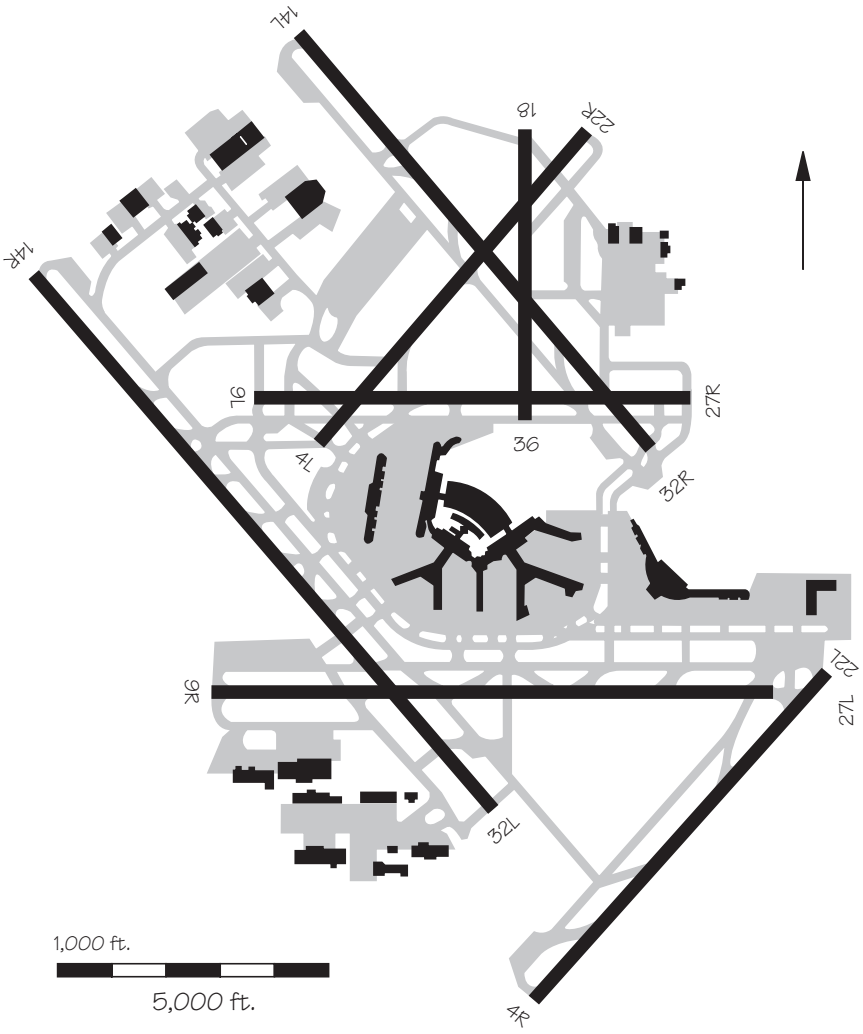
A 1,000 ft. extension to Runway 32R and a 3,400 ft. extension to Runway 14L are planned. No estimate of cost or completion dates are available at this time.



ONT — Ontario International Airport

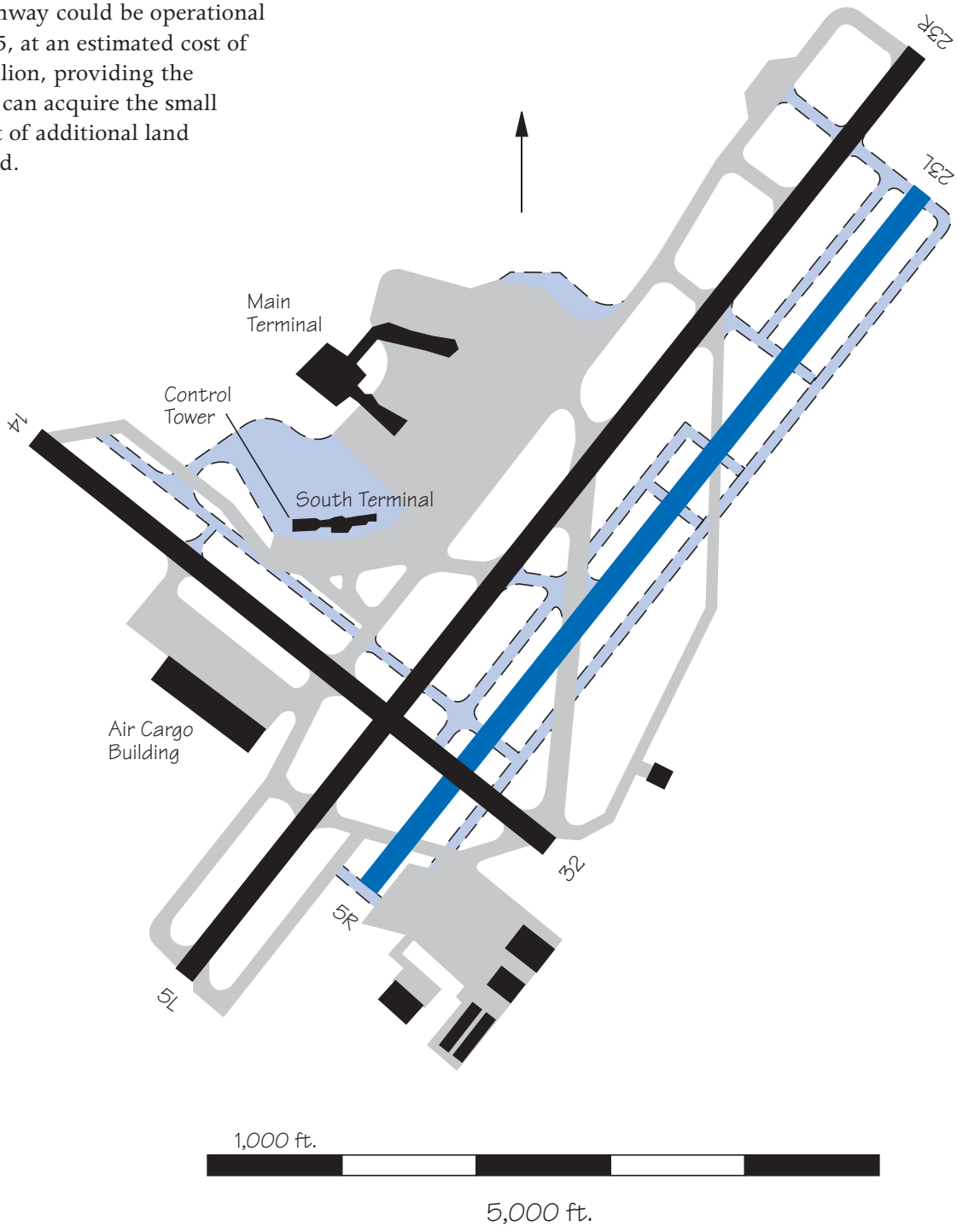


ORD — Chicago O'Hare International Airport



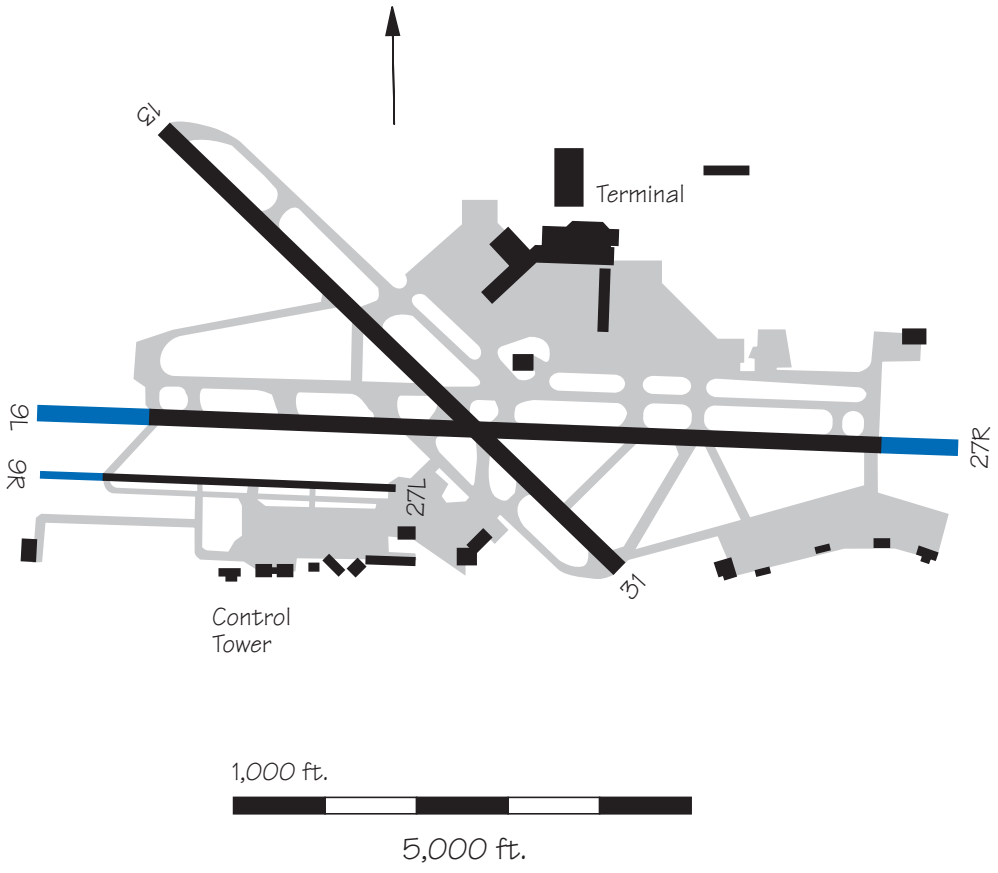
ORF — Norfolk International Airport

A new air carrier runway, Runway 5R/23L, was analyzed by the Eastern Virginia Capacity Design Team. A Master Plan Update is currently underway. The runway could be operational by 2005, at an estimated cost of $75 million, providing the airport can acquire the small amount of additional land required.



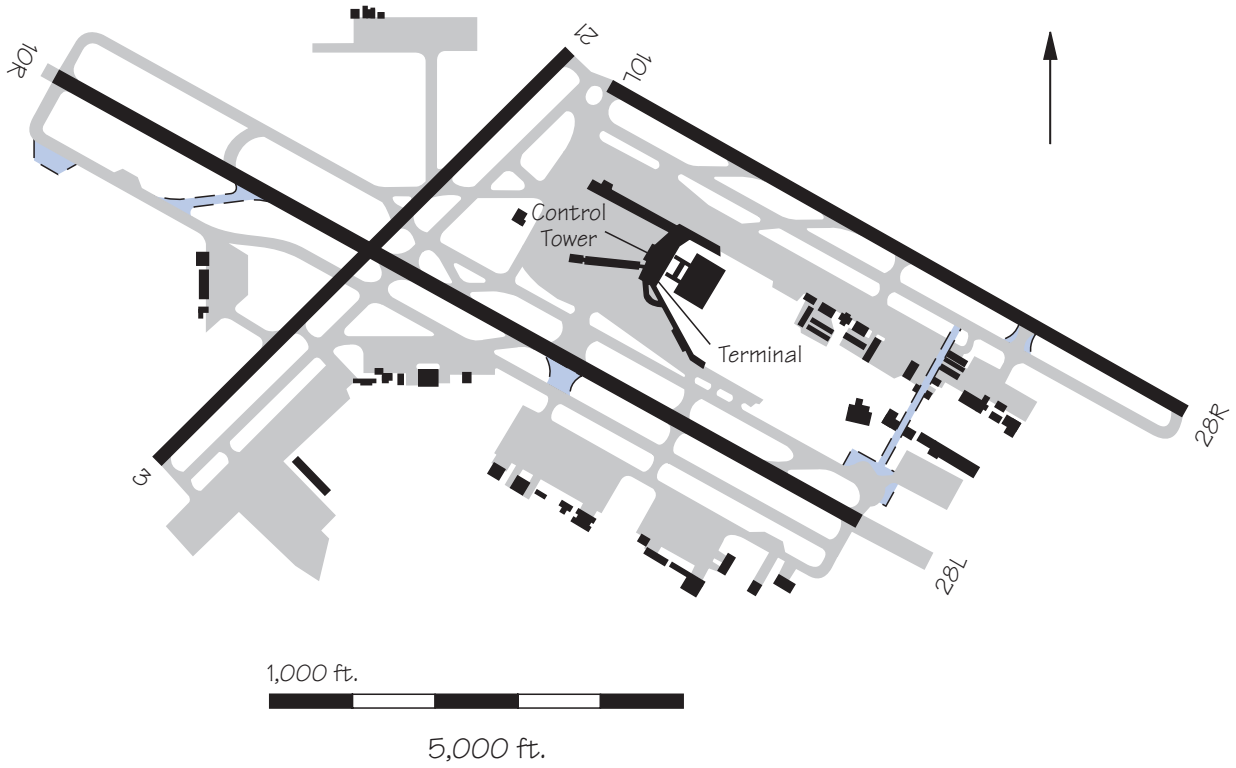
PBI — Palm Beach International Airport

Runway 9L/27R is planned to be extended 1,200 ft. to the west and 811 ft. to the east, for a total length of 10,000 ft.. The total estimated project cost is $12.9 million. An environmental assessment is planned to be completed in 1998. Construction is planned to start in 1999 and be completed in 2000. The runway thresholds will remain in their present locations, therefore, the extended length will only be used for departures.



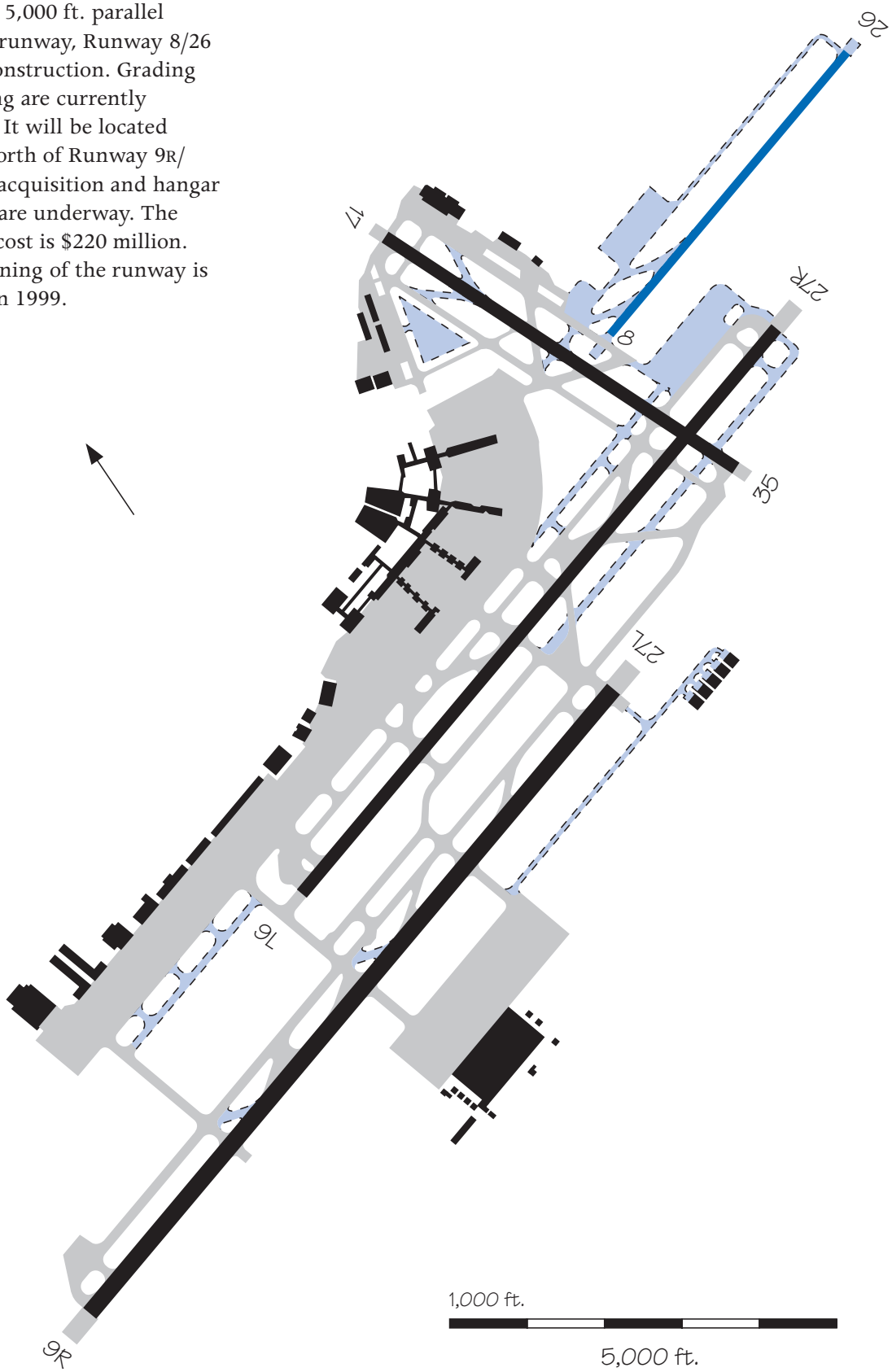
PDX — Portland International Airport

As a result of the 1996 Capacity Enhancement Plan, two new high speed taxiway exits along Taxiway B were constructed, and two exits along Taxiway C will be constructed in the future. A north/south taxiway is also recommended to connect the east ends of the parallel runways. Installation of an ILS on 28L is planned in 1999.



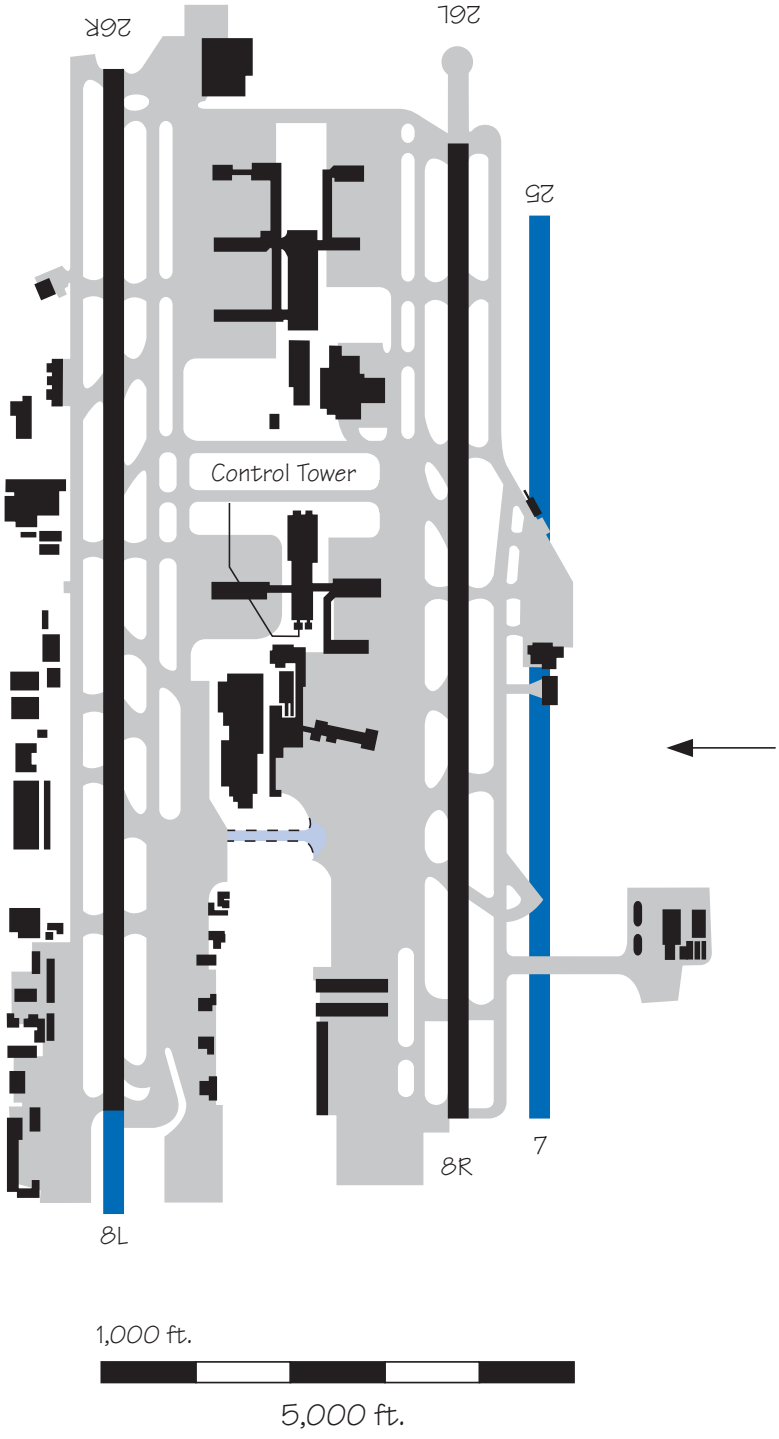
PHL — Philadelphia International Airport

A new 5,000 ft. parallel commuter runway, Runway 8/26 is under construction. Grading and phasing are currently underway. It will be located 3,000 ft. north of Runway 9R/27L. Land acquisition and hangar relocation are underway. The estimated cost is $220 million. Commissioning of the runway is expected in 1999.



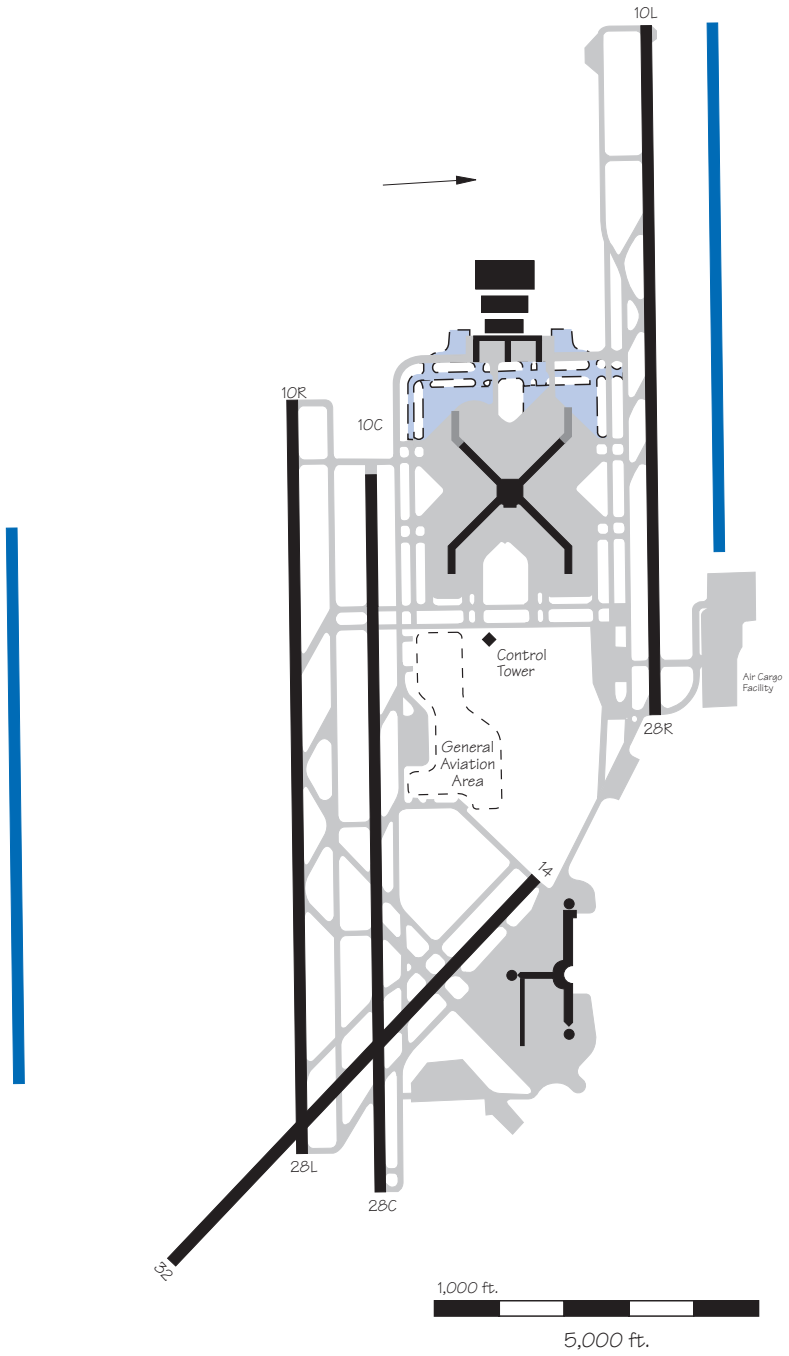
PHX — Phoenix Sky Harbor International Airport

A new third parallel runway, Runway 7/25, is currently under construction 800 ft. south of Runway 8R/26L. The planned operational date is September 1999. Runway 7/25 is being constructed to a length of 7,800 ft. The airport layout plan proposes an ultimate length of 9,500 ft., but further construction is not scheduled at this time.

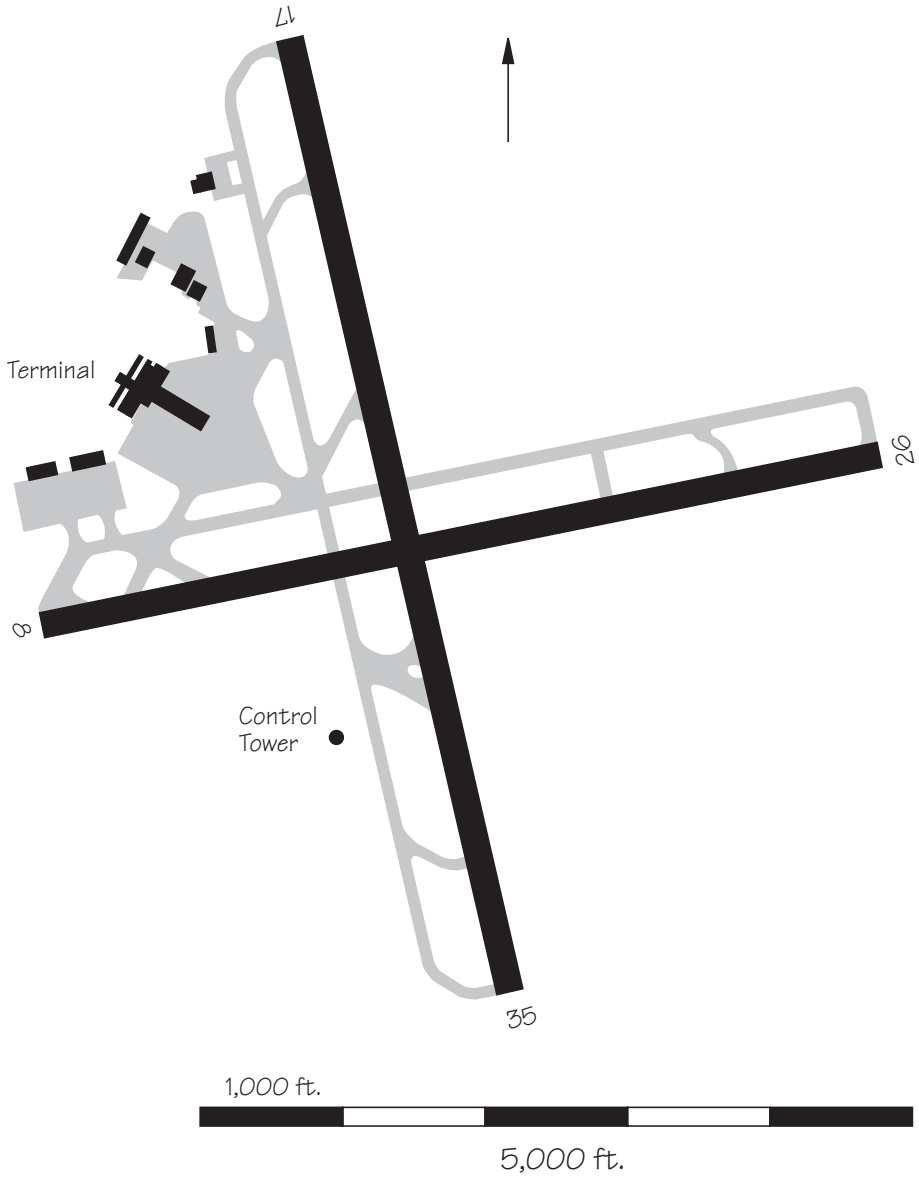


PIT — Greater Pittsburgh International Airport

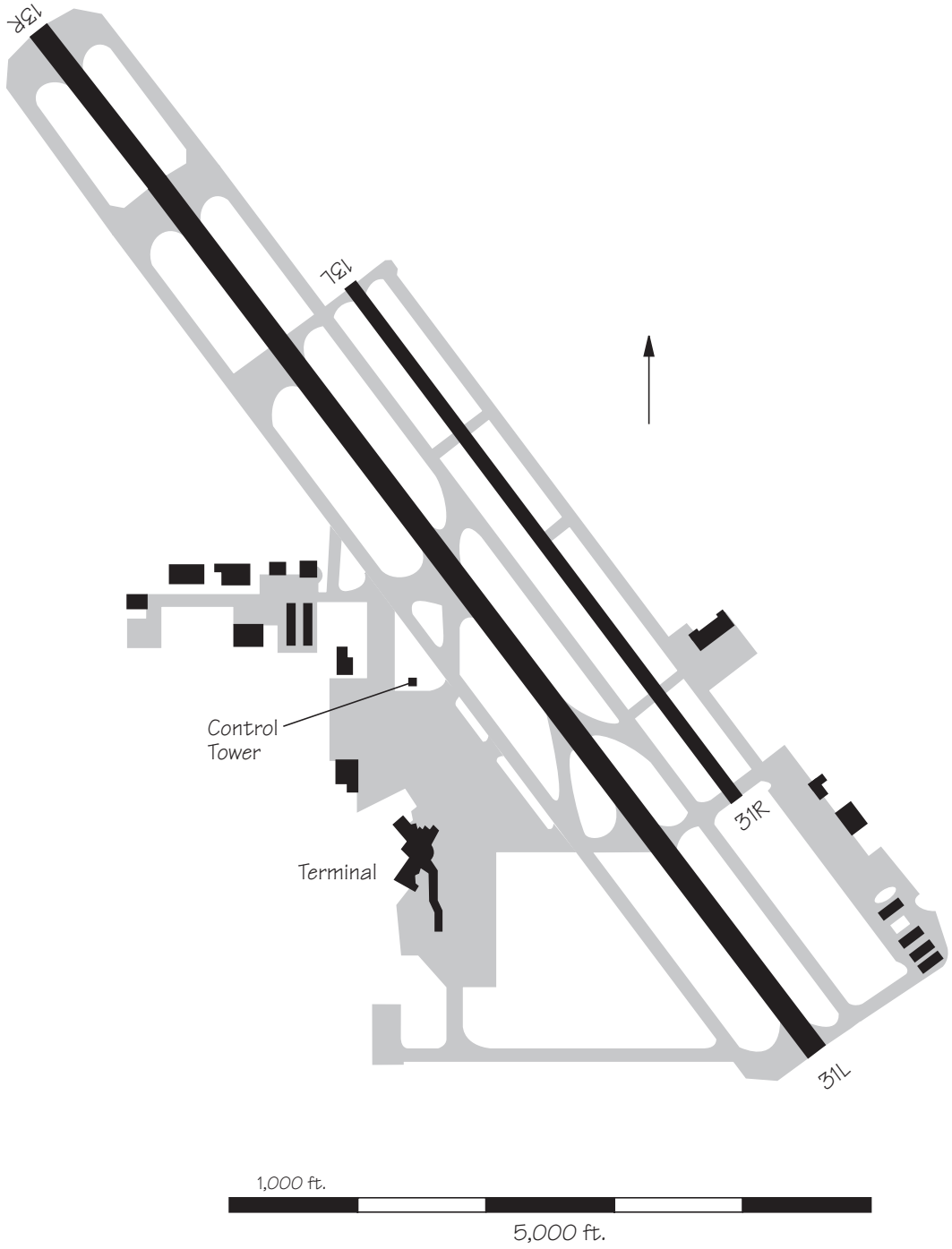
A recently completed Master Plan has recommended that at least two new runways will be needed within a twenty year planning period to accommodate projected Baseline (normal growth) forecast demands and achieve acceptable aircraft delay times and associated delay costs. Construction of the two east/west runways include a northern parallel and a southern parallel, with the latter as the preferred first-build runway. The southern parallel will be located approximately 4,300 ft. south of existing Runway 10R/28L and should be operational by the time the airport reaches 495,000 annual aircraft operations. The northern parallel runway will be located 1,000 ft. north of existing Runway 10L/28R and should be operational by the time the airport reaches 522,000 annual aircraft operations.



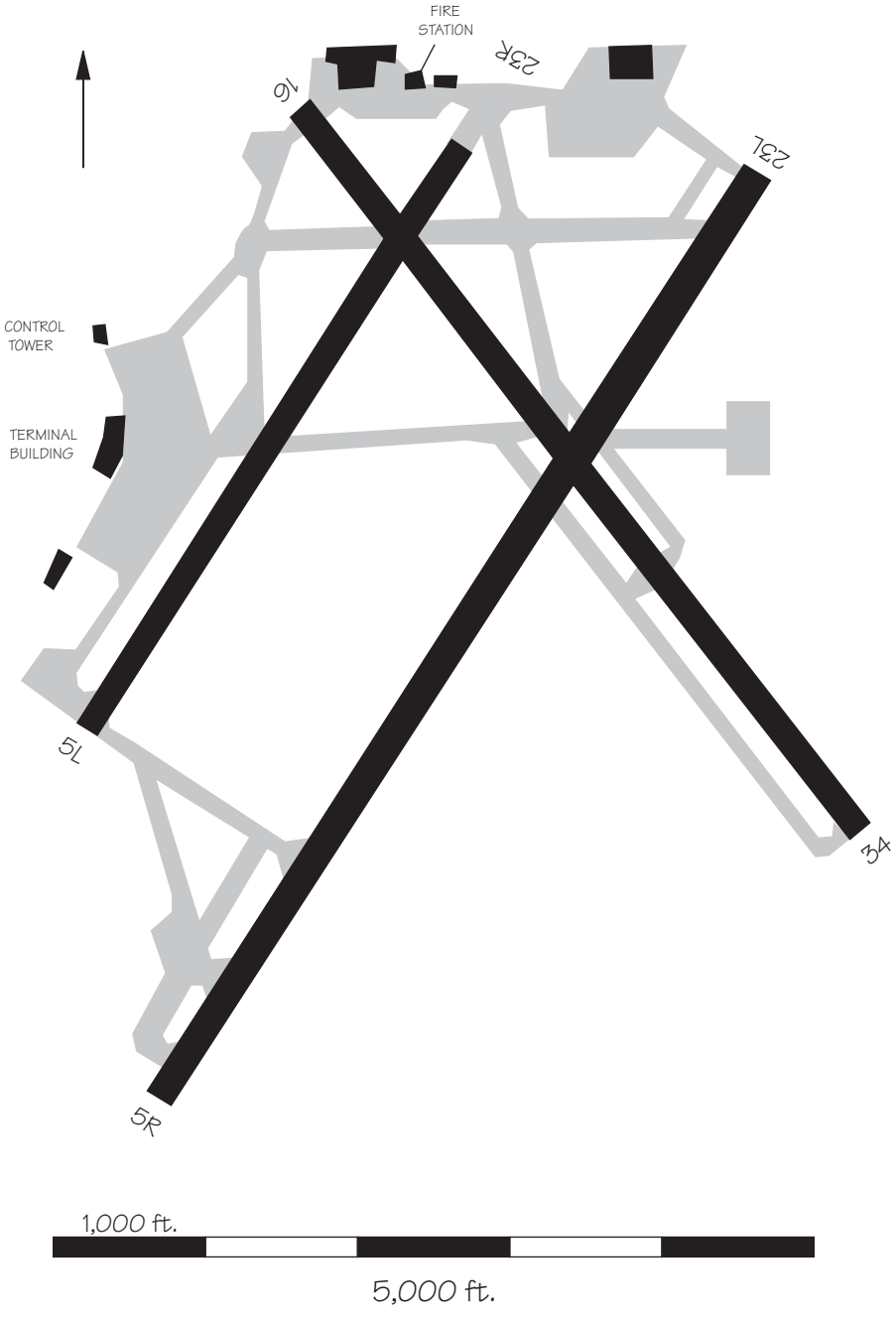
PNS — Pensacola Regional Airport



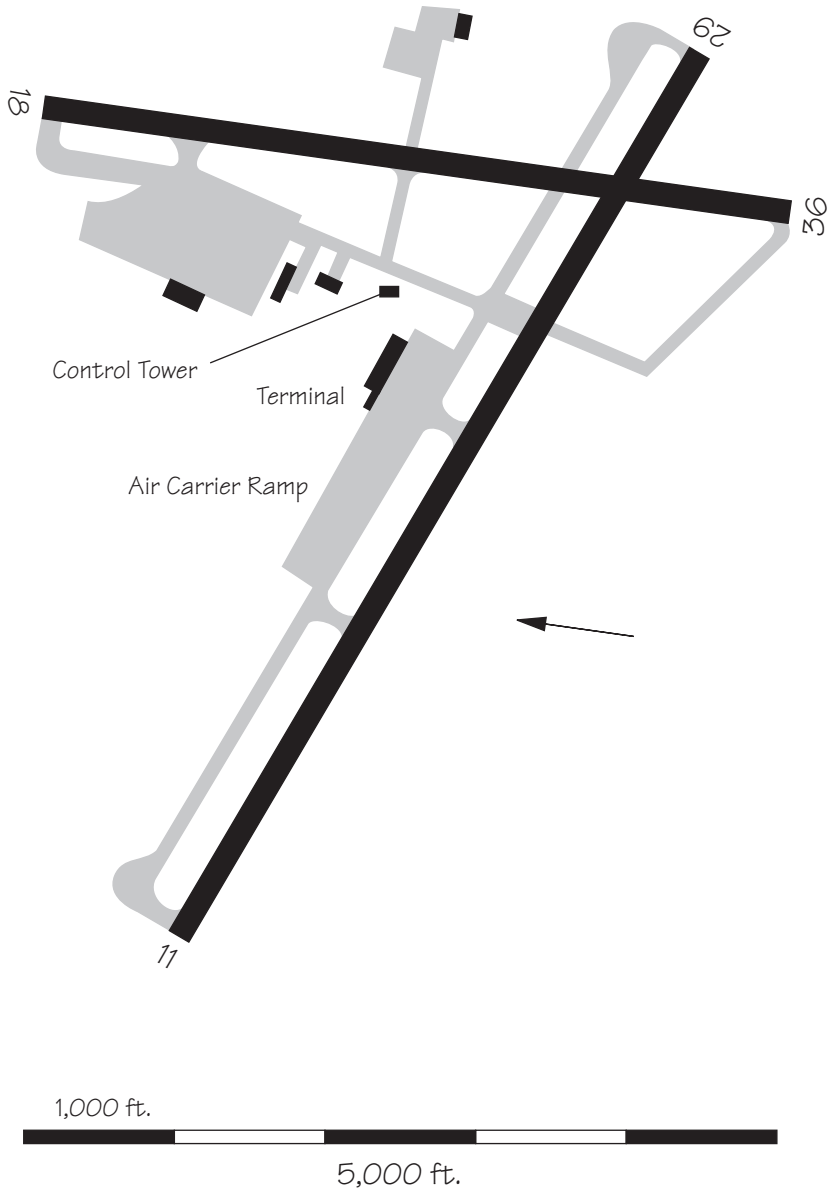
PSP — Palm Springs Regional Airport



PVD — Providence Theodore Francis Green State Airport

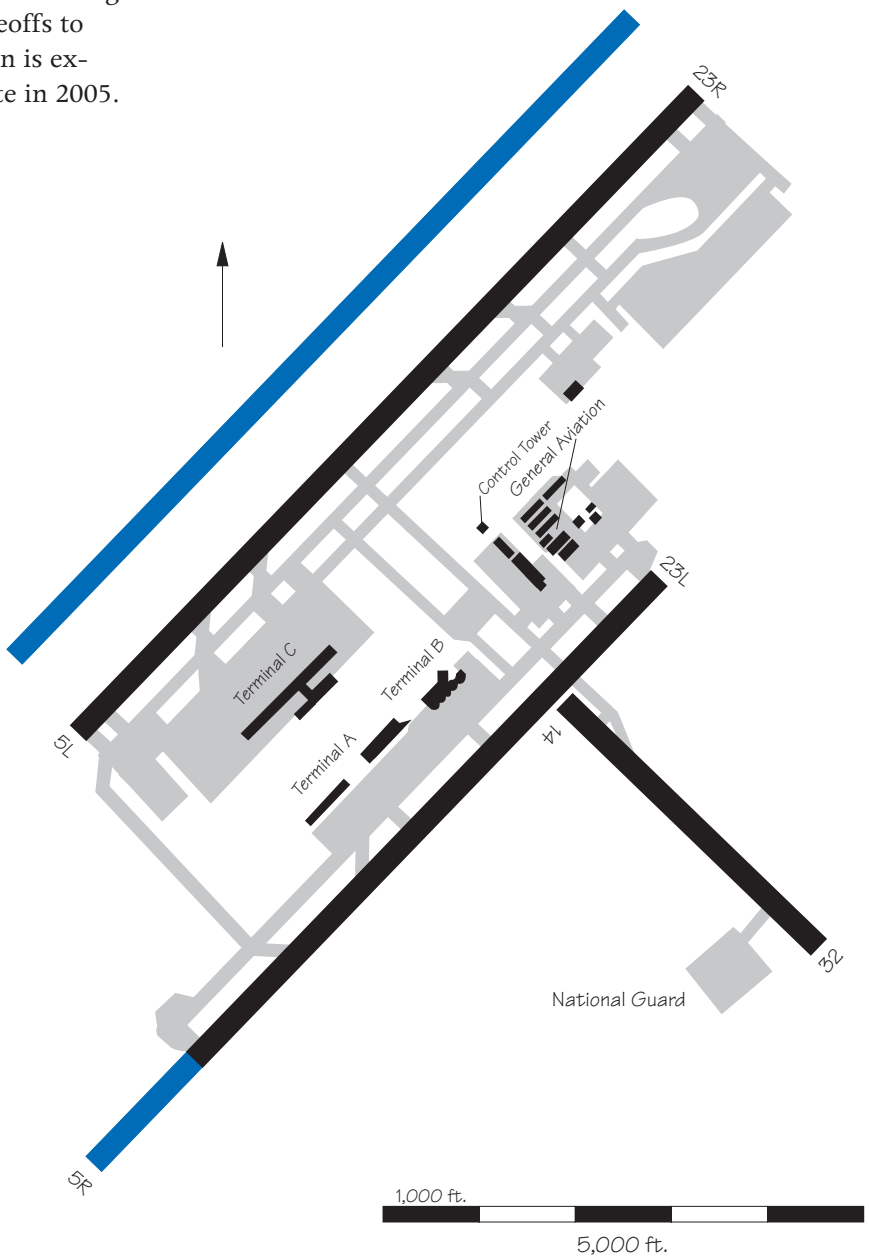


PWM — Portland International Jetport



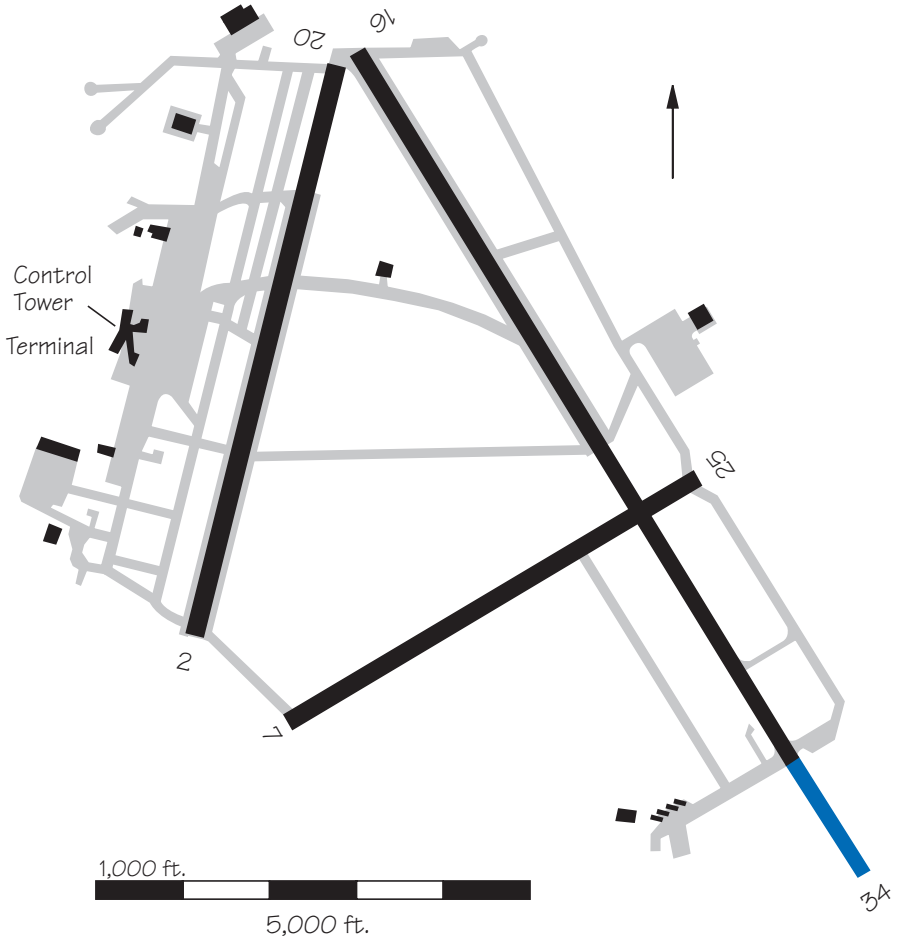
RDU — Raleigh-Durham International Airport

A new 9,500 ft. parallel runway, located approximately 1,050 ft. west of existing Runway 5L/23R, is planned for the future. Also planned is a 1,500 ft. runway extension to the south end of existing Runway 5R/23L, bringing the total useable length for landings and takeoffs to 9,000 ft. Construction is expected to be complete in 2005.

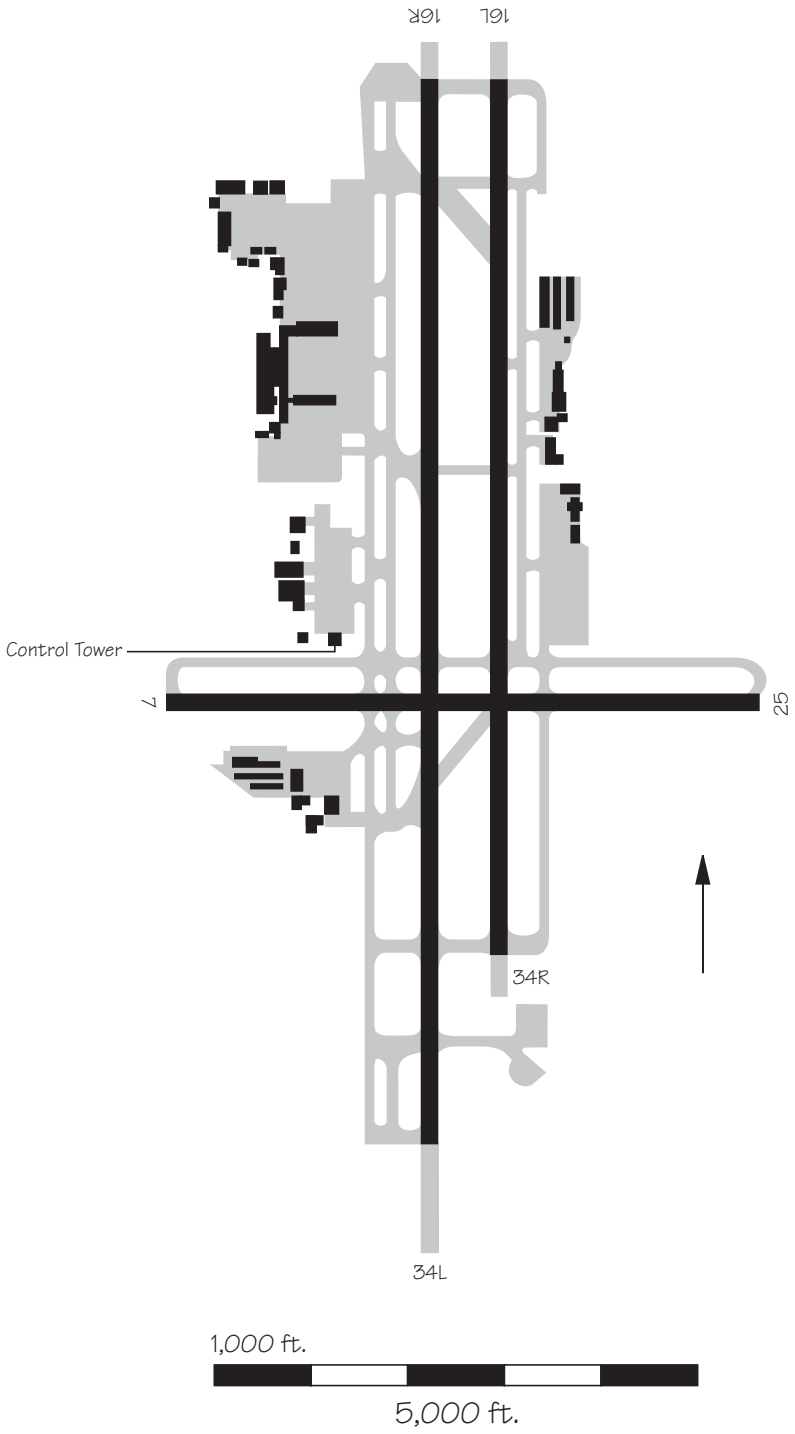


RIC — Richmond International Airport

An extension of Runway 16/34 is planned. Construction is expected to start in 2000.

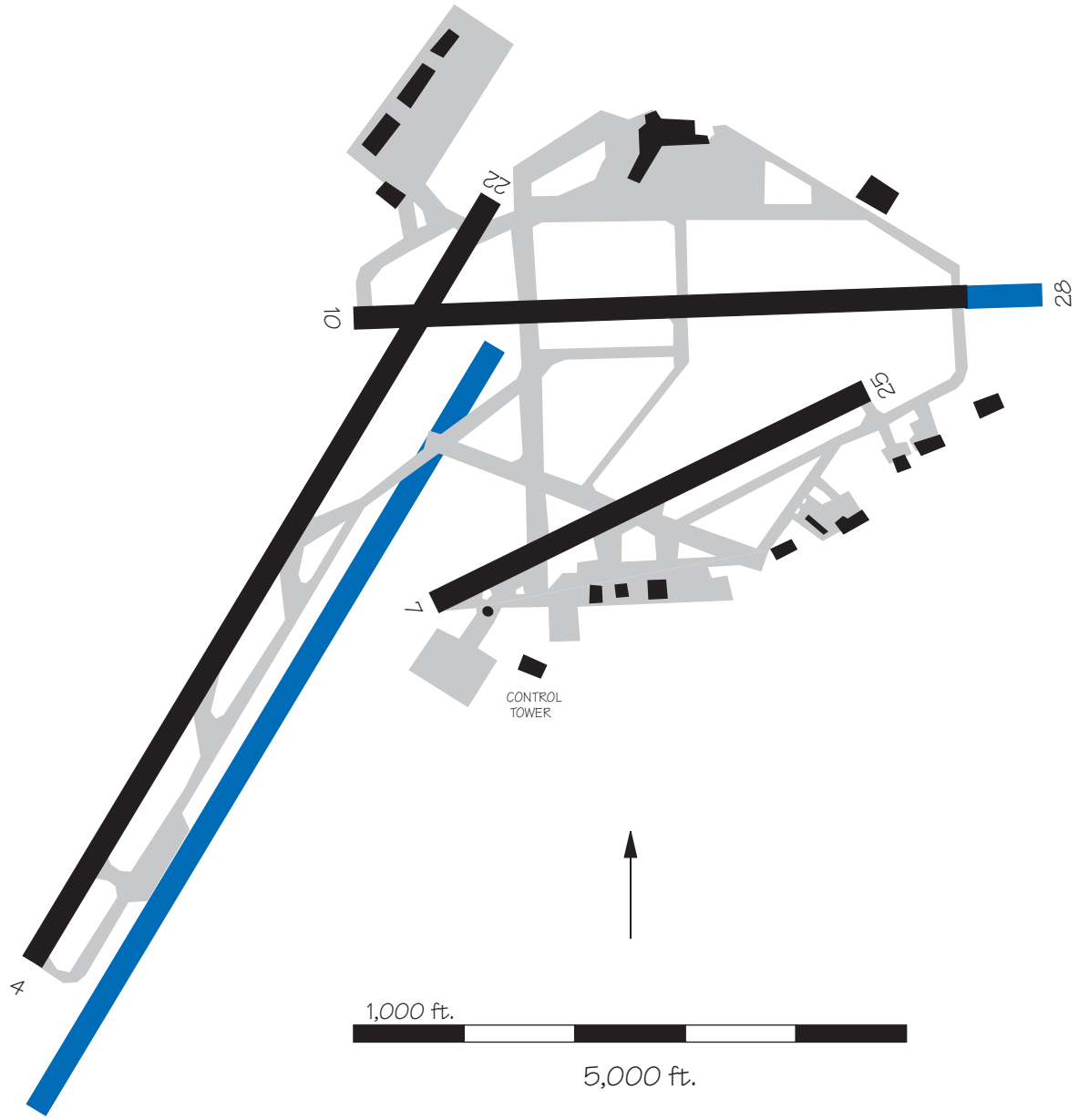


RNO — Reno Tahoe International Airport



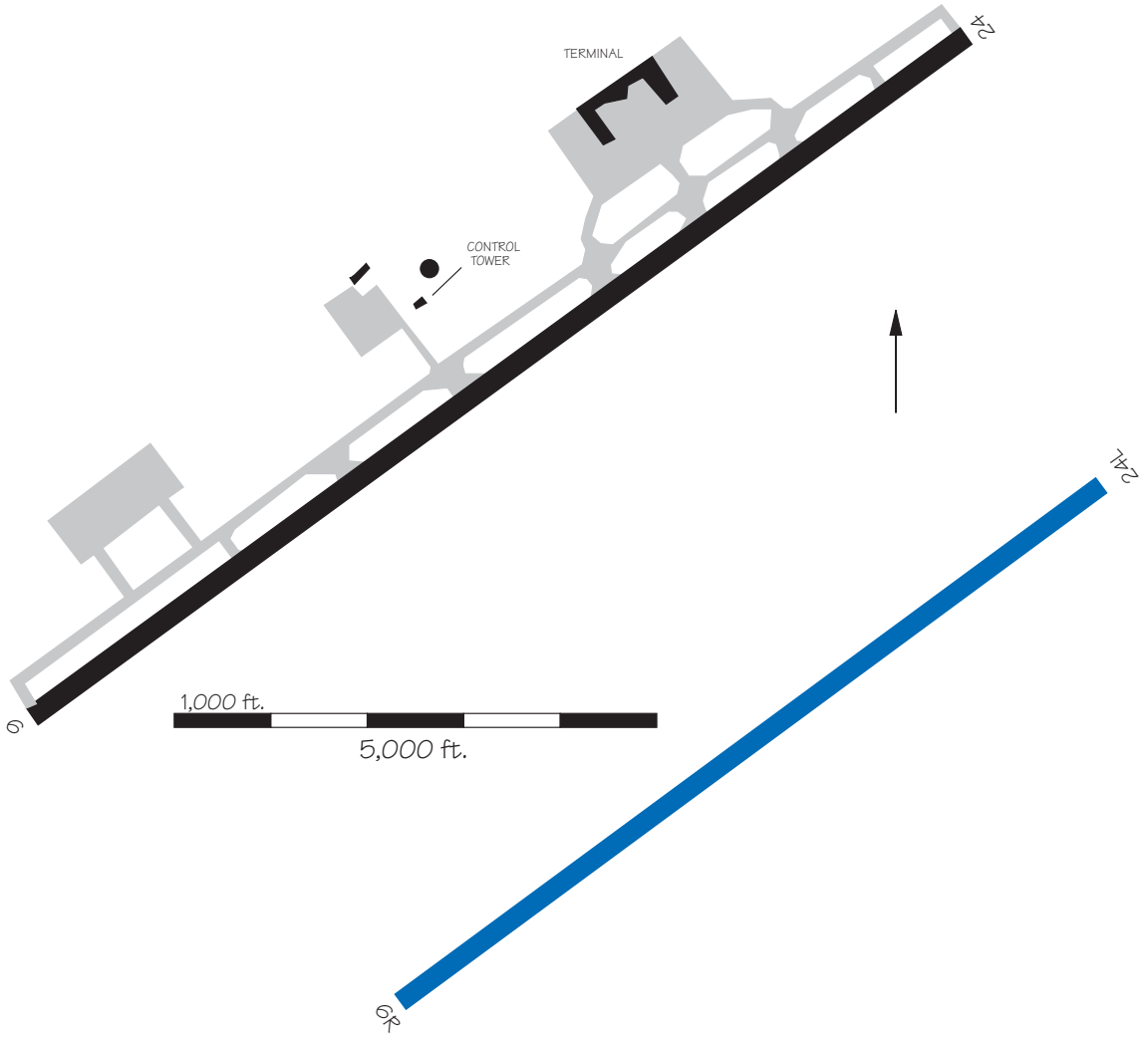
ROC — Greater Rochester International Airport

Construction of an extension to Runway 10/28 is being considered. The estimated cost of construction is $3.2 million. An extension to Runway 4/22 is also being considered, and is expected to cost $4 million. Construction of a new parallel Runway 4R/22L 700 ft. southeast of Runway 4/22 is estimated to cost $10 million. These runway improvements are anticipated post 2000. Environmental assessments have not yet been started for these projects.

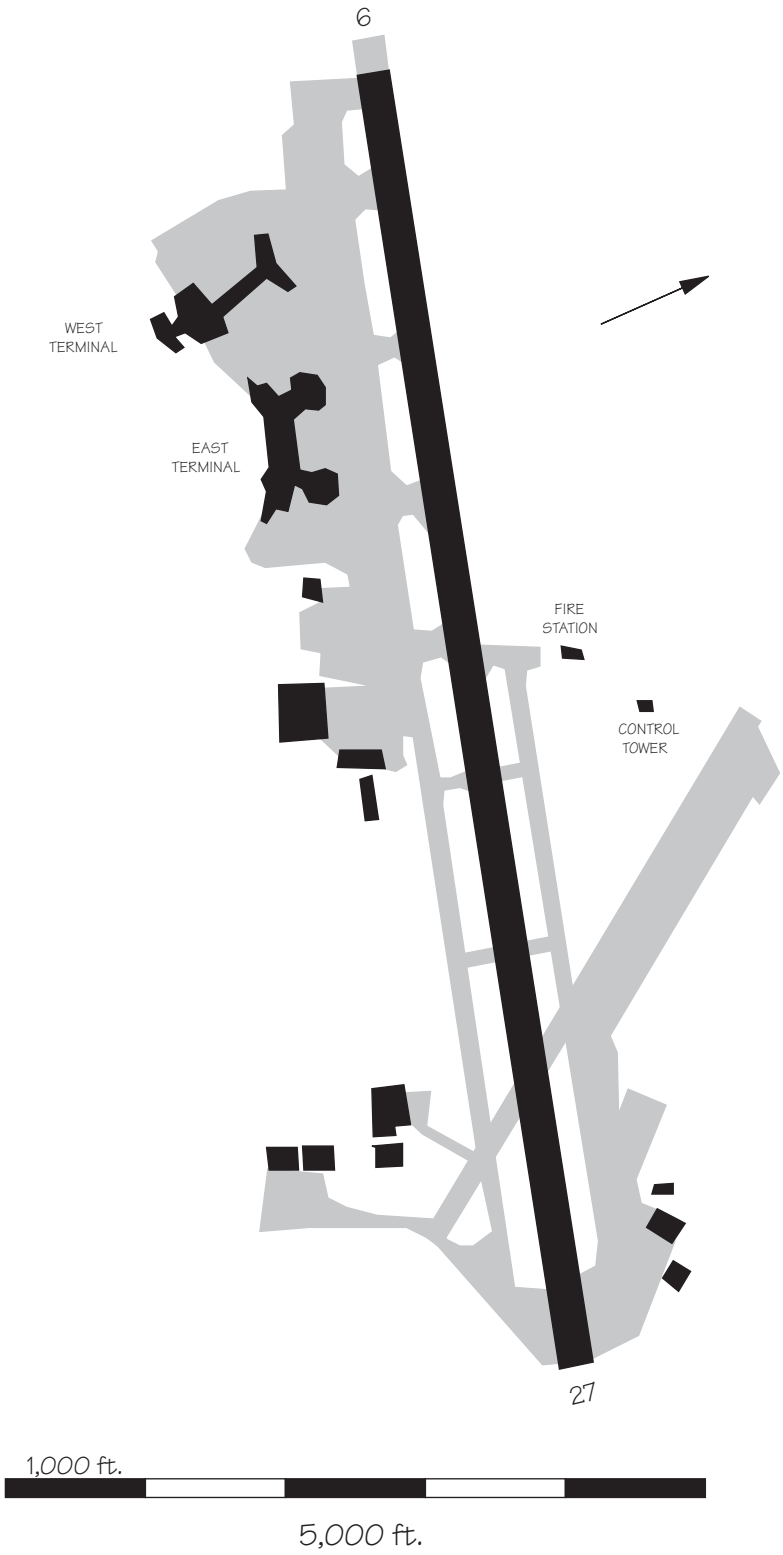


RSW — Fort Myers Southwest Florida Regional Airport

Planning has begun for a new 9,100 ft. parallel runway, Runway 6R/24L, 4,300 ft. or more southeast of Runway 6/24. Construction is expected to begin in 2002. The new runway should be operational by 2004. The estimated cost of the project is $80 million. This new runway will support independent parallel operations. A new terminal complex is planned to be located between the parallel runways.

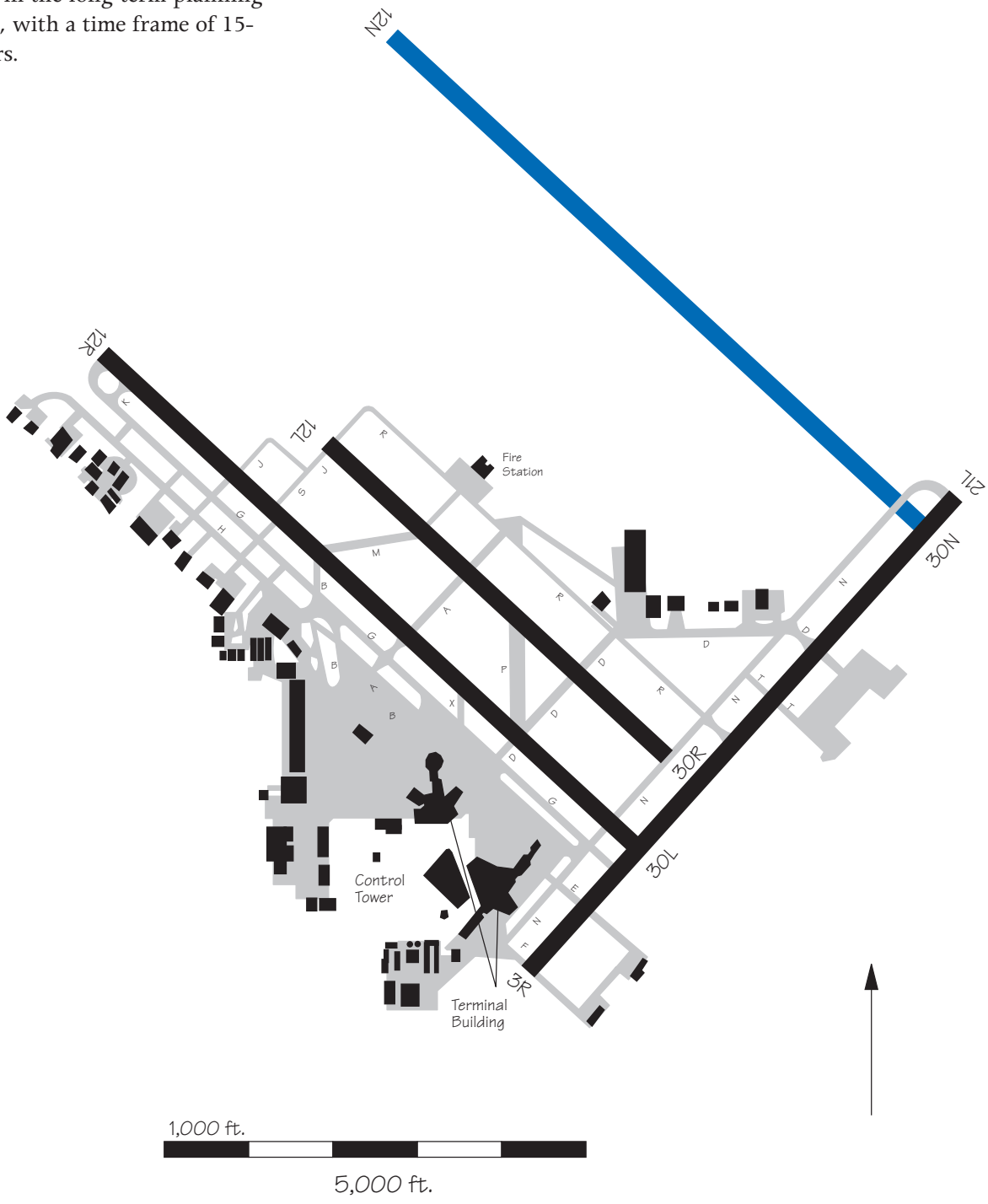


SAN — San Diego International Lindberg Field



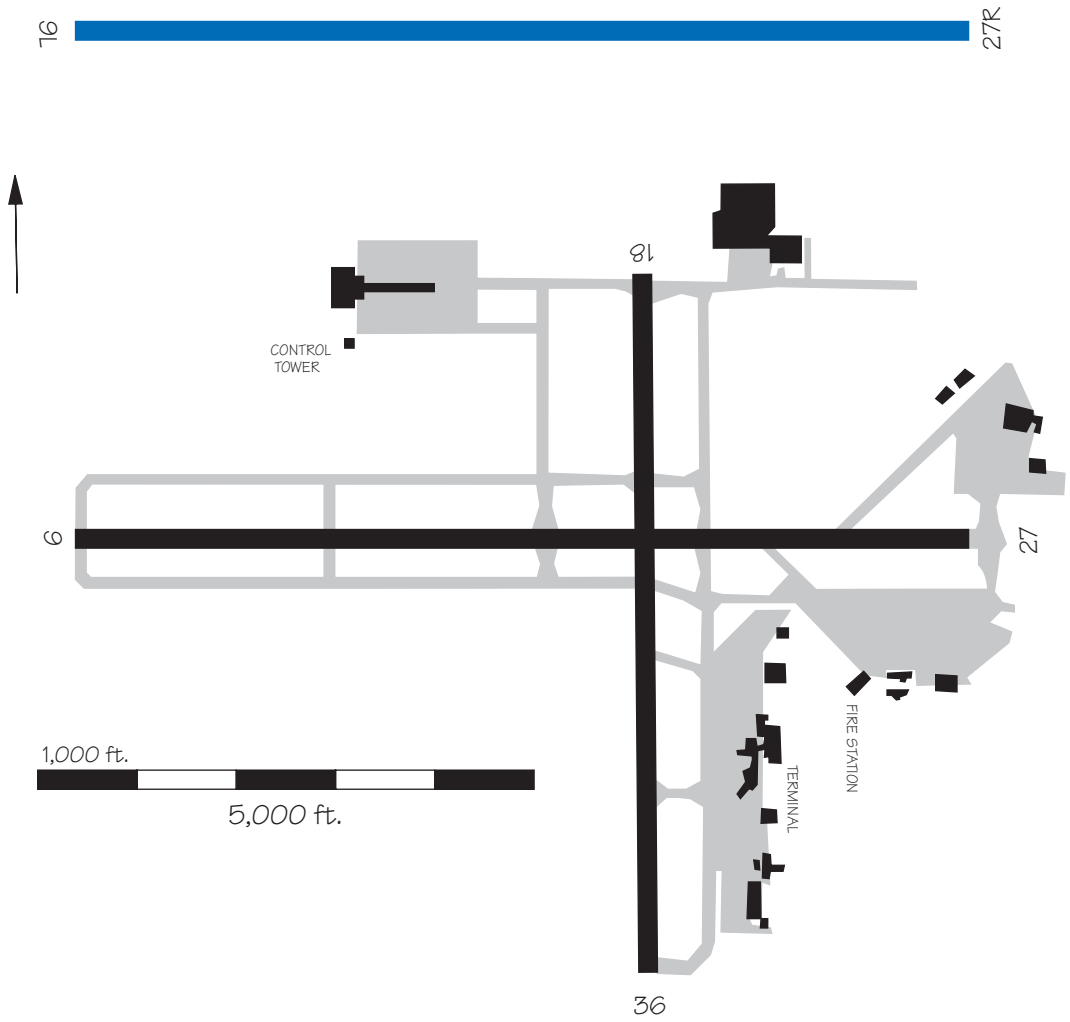
SAT — San Antonio International Airport

Reconstruction and extension of Runway 12L/30R for air carrier operations is being planned for beyond 2000, as demand warrants. A third parallel runway, Runway 12N/30N, is in the long term planning as well, with a time frame of 15-20 years.

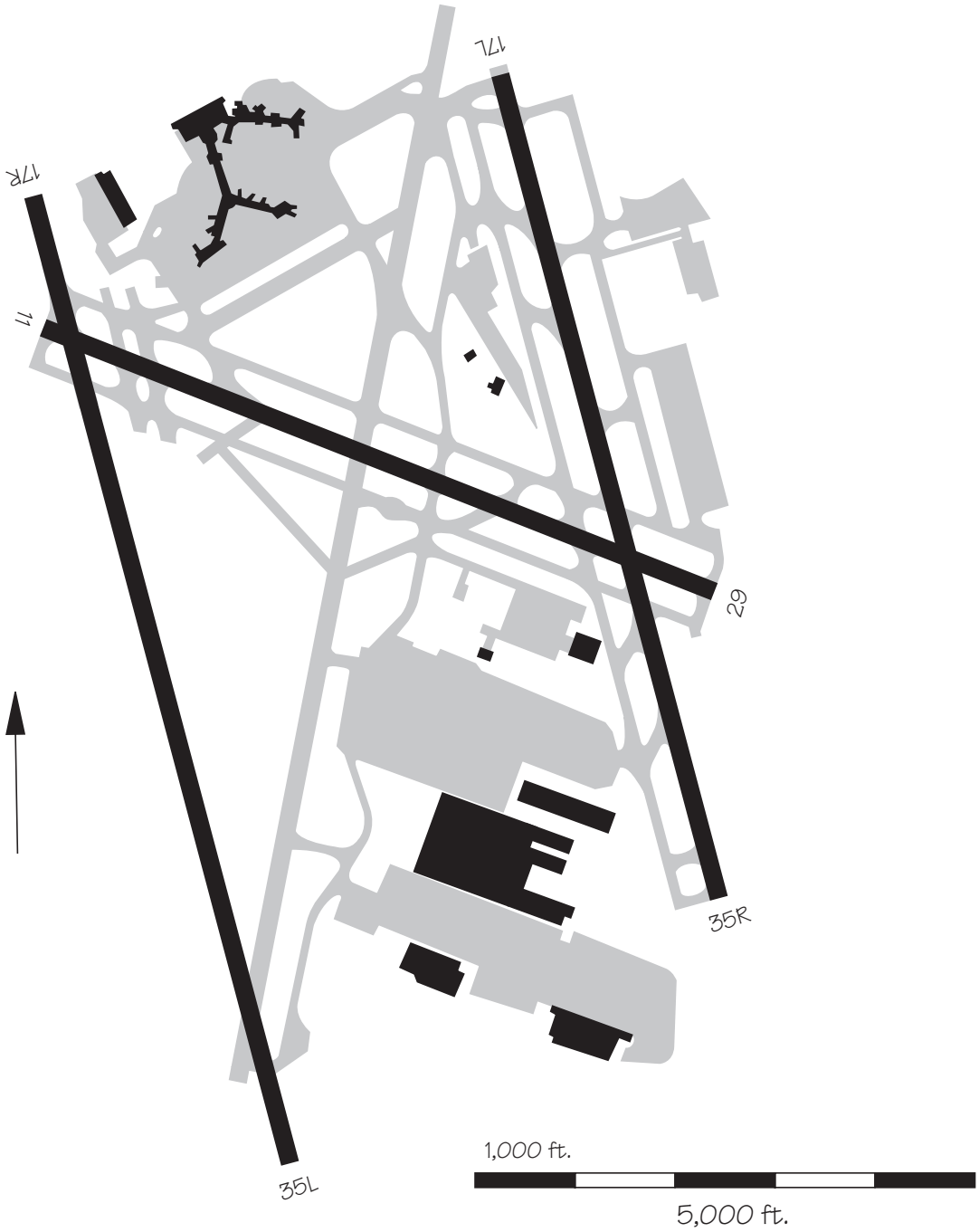


SAV — Savannah International Airport

A new 9,000 ft. parallel runway, Runway 9L/27R, approximately 5,000 ft. north of Runway 9/27, is expected to be constructed in 2020, with an estimated cost of $20 million. This runway would allow independent parallel operations, thereby potentially doubling hourly capacity.

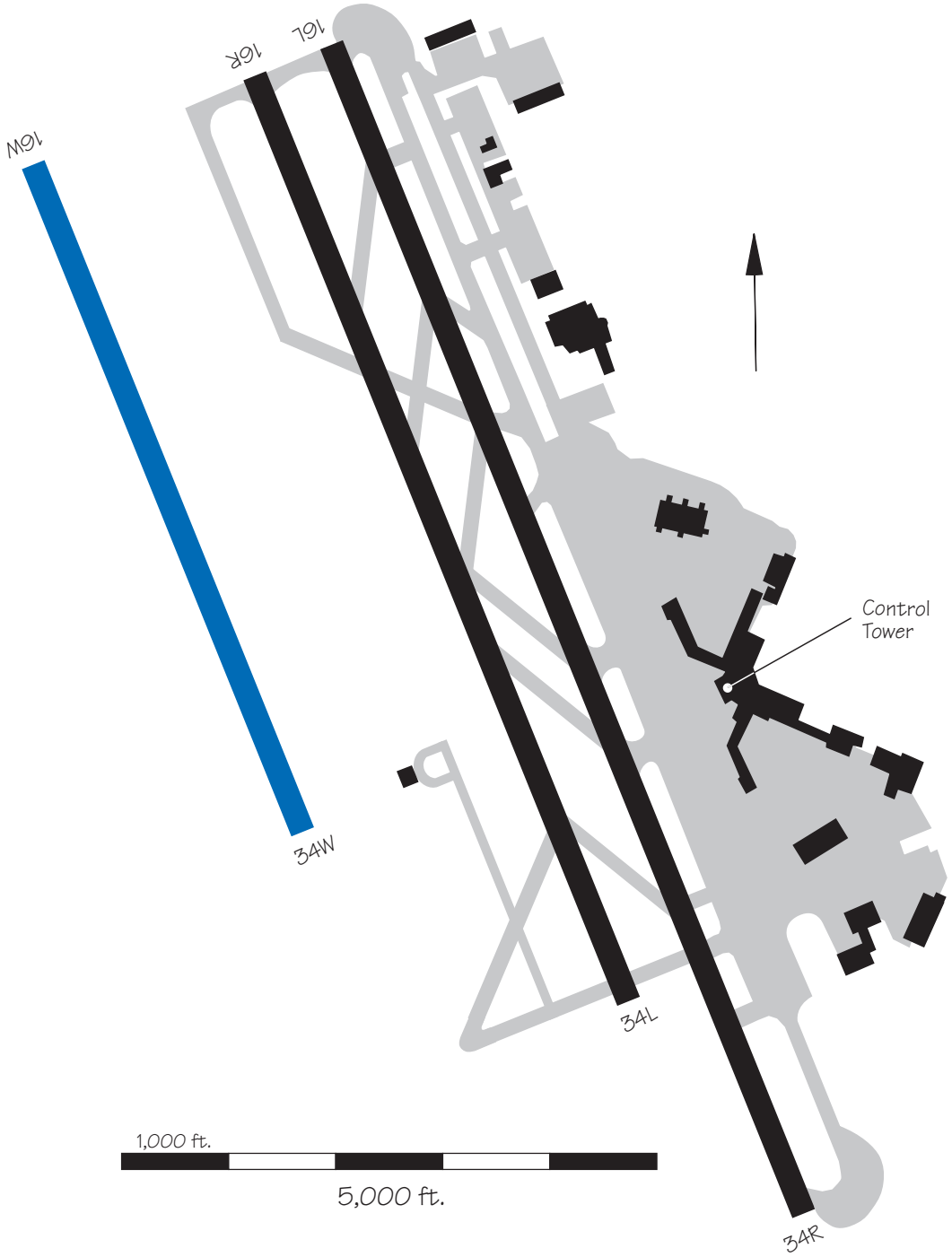


SDF — Louisville International Airport

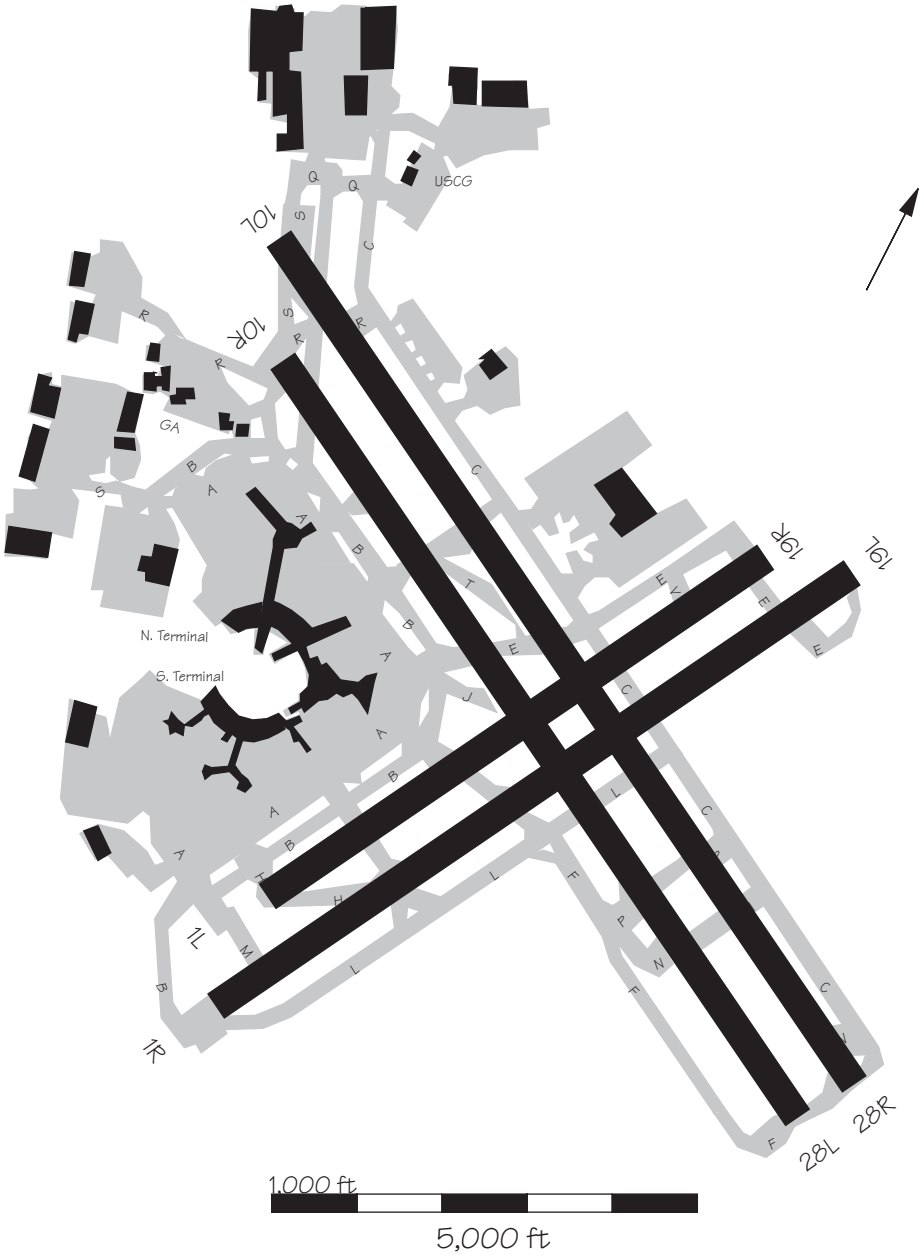


SEA — Seattle-Tacoma International Airport

Airport improvements include a new Runway 16W/34W, 8,500 ft. in length, which will be located 2,500 ft. from Runway 16L/34R. Construction began in 1997. The runway will be completed by 2004 for $585 million.

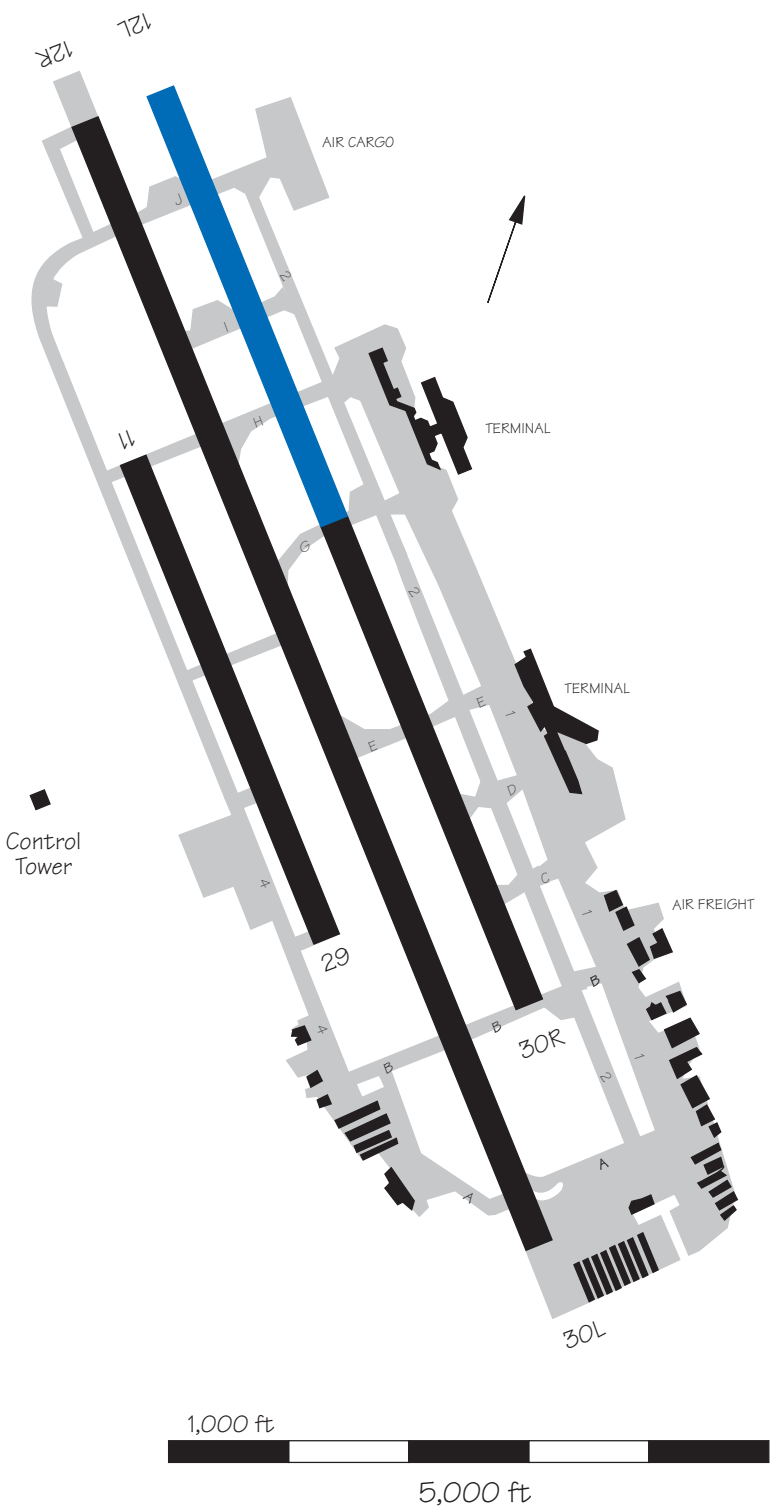


SFO — San Francisco International Airport



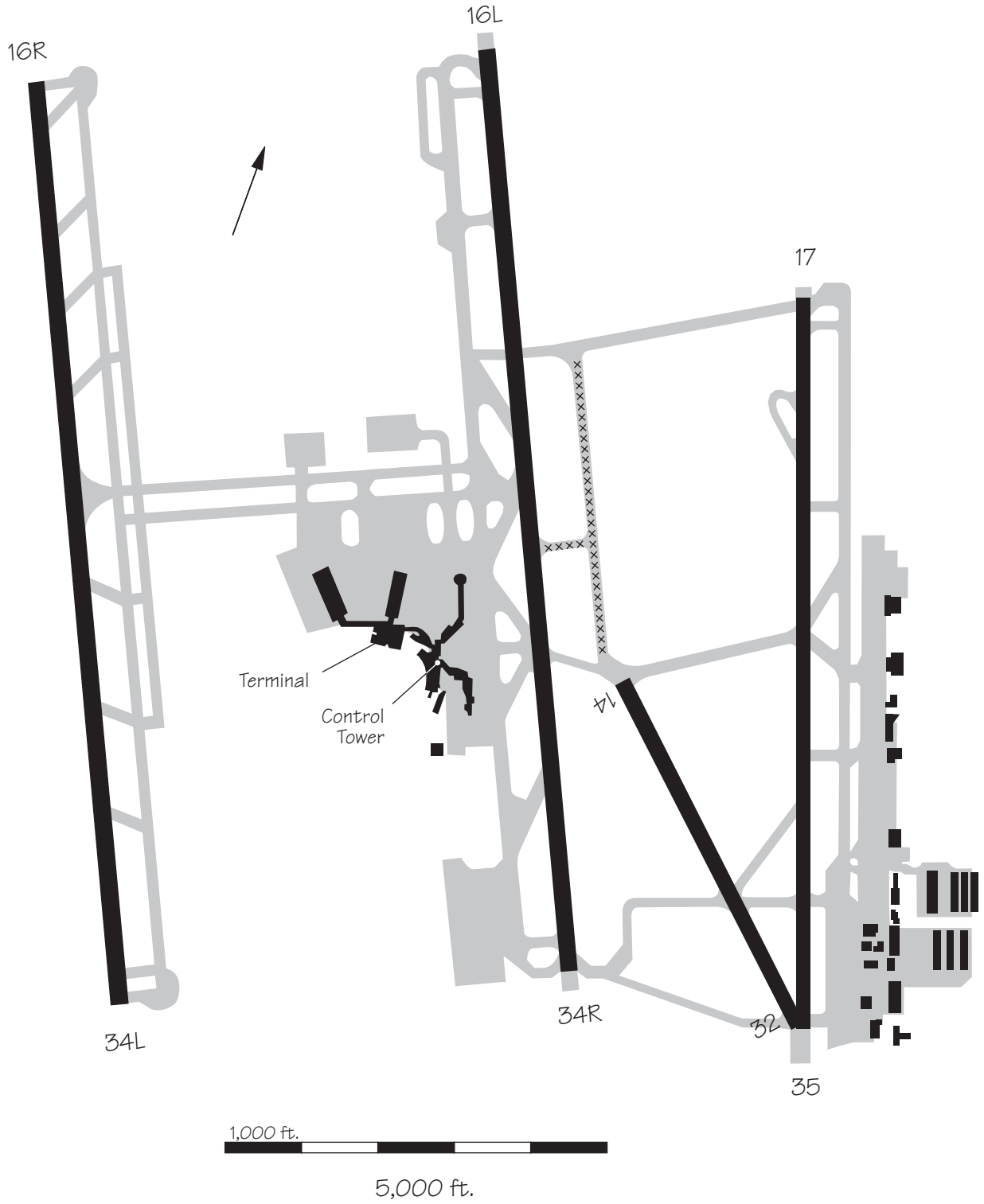
SJC — San Jose International Airport

Environmental documentation is currently being prepared in support of the extension of Runway 12L/30R. If this option is determined to be environmentally acceptable and is adopted by the sponsor, construction will begin in 1999.



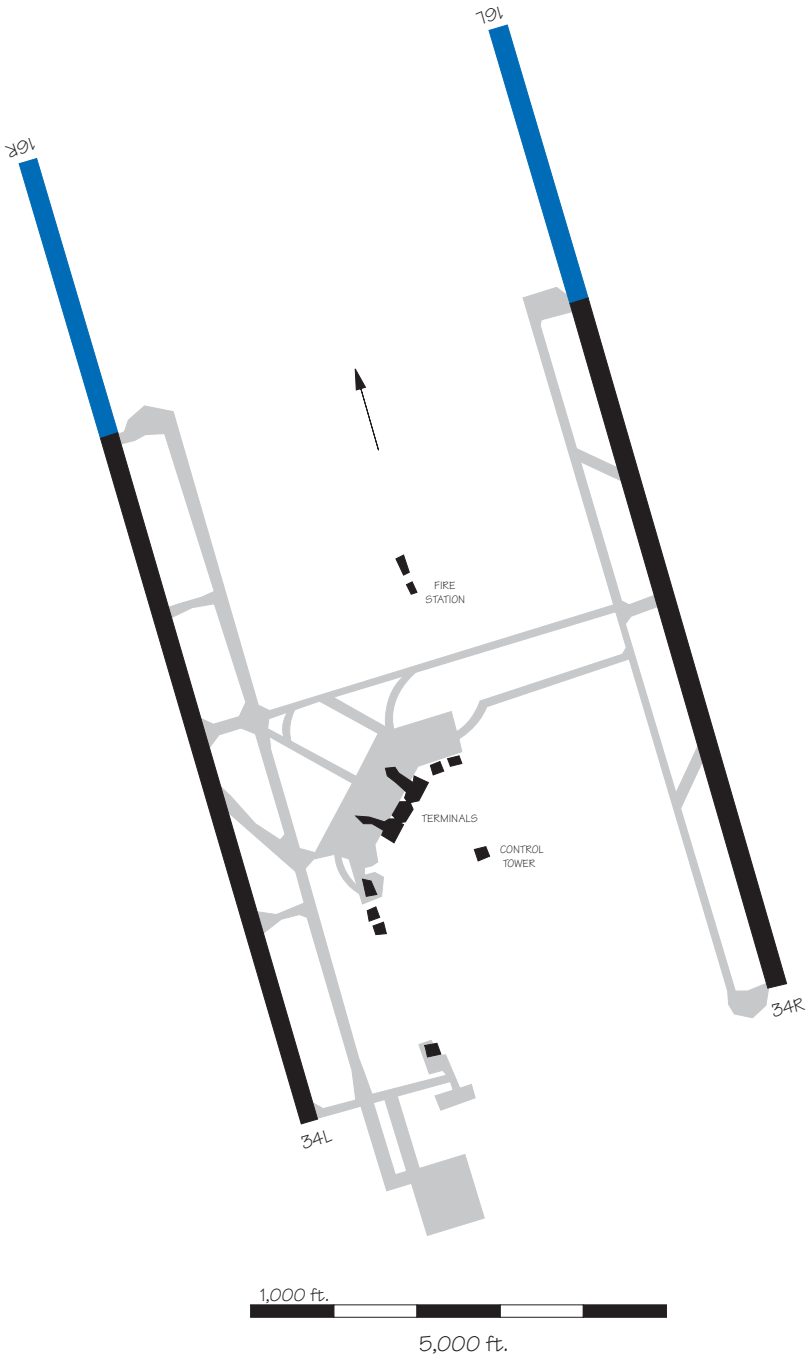
SJU — San Juan Luis Muñoz Marín International Airport

SLC — Salt Lake City International Airport



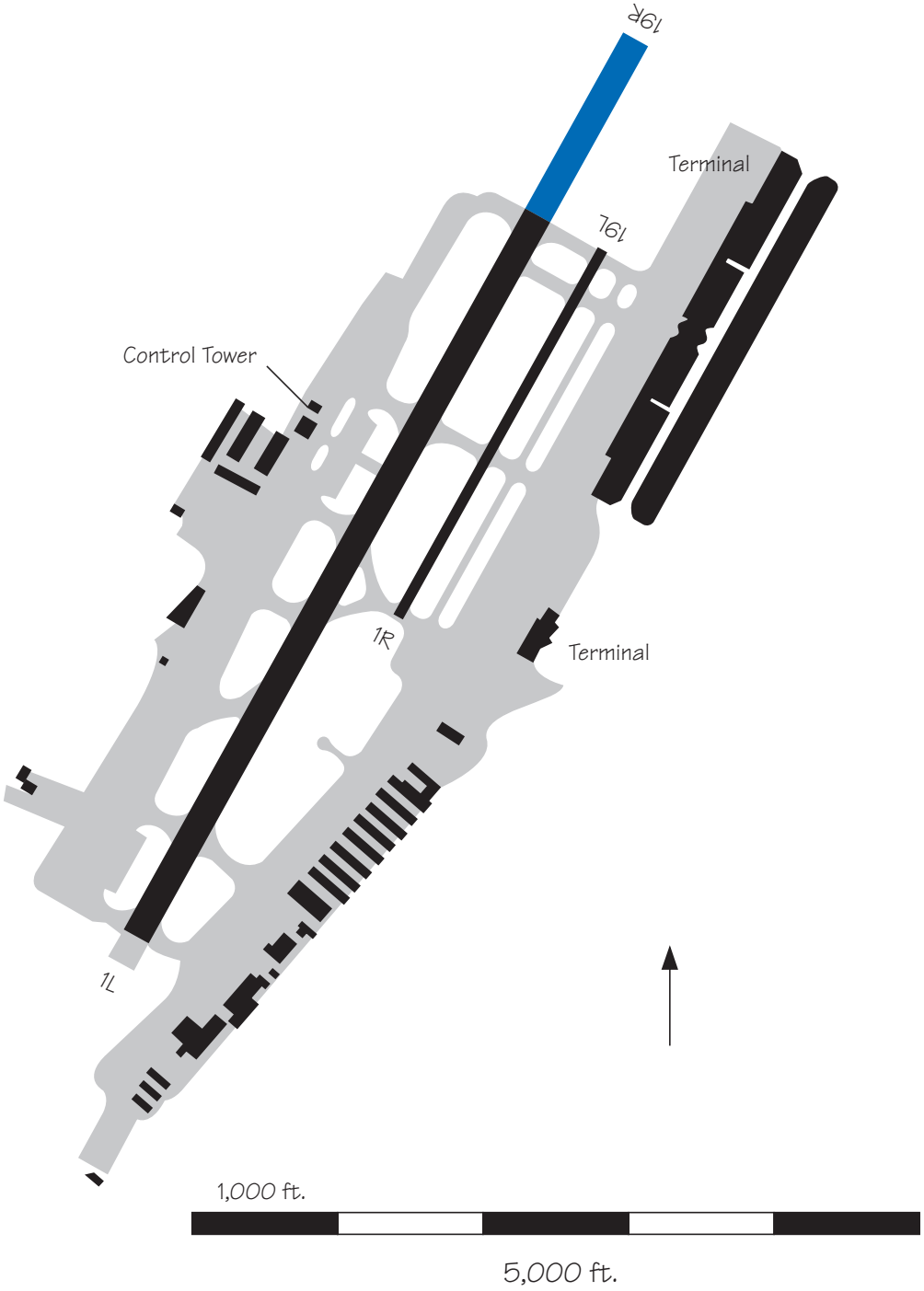
SMF — Sacramento international Airport

Northerly extensions to both runways, to an ultimate length of 12,000 ft. each, are proposed as long term development items. No specific time frame for this development has been identified.



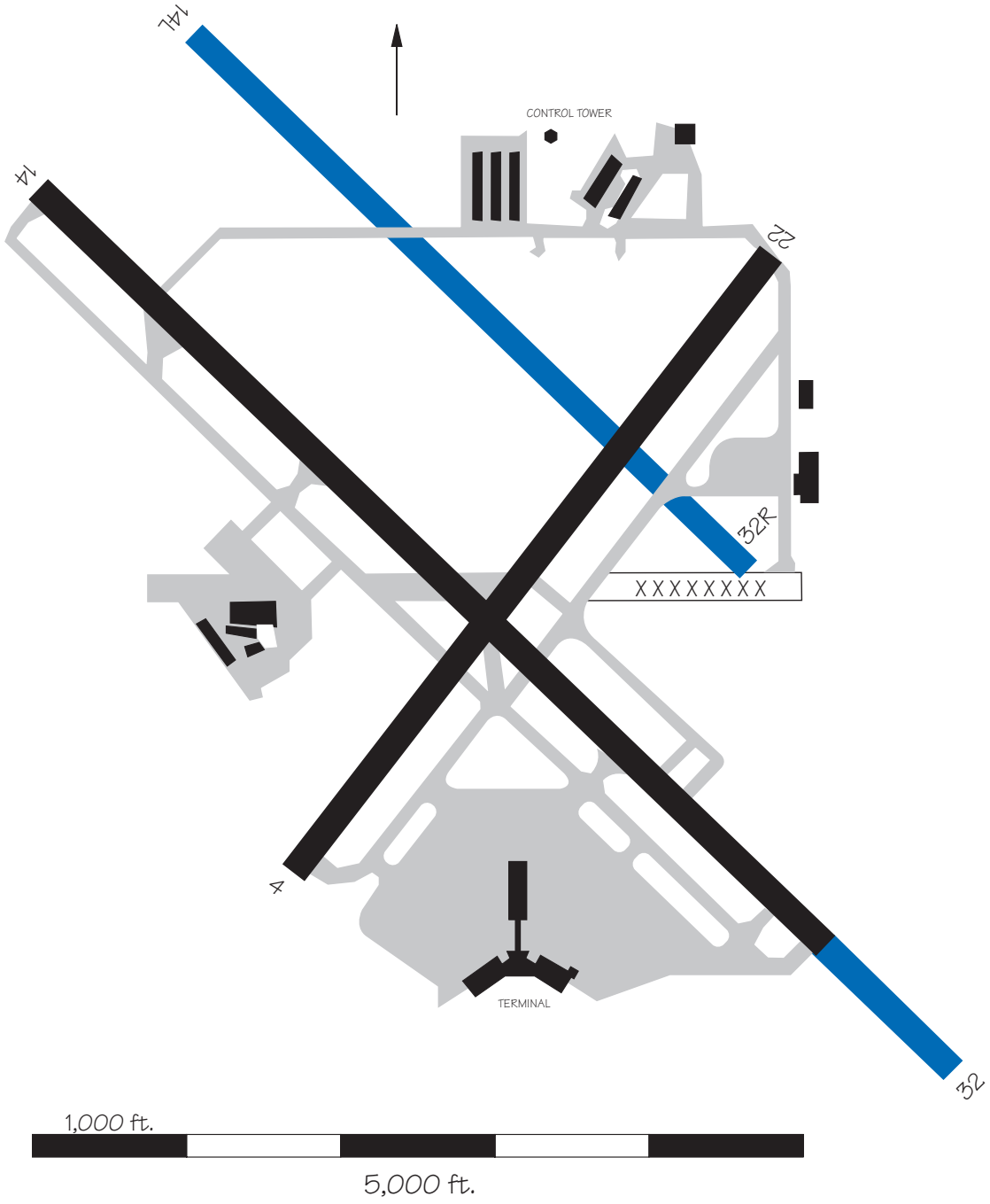
SNA — John Wayne Airport - Orange County

An extension of Runway 1L/19R is proposed but is not being considered at this time.



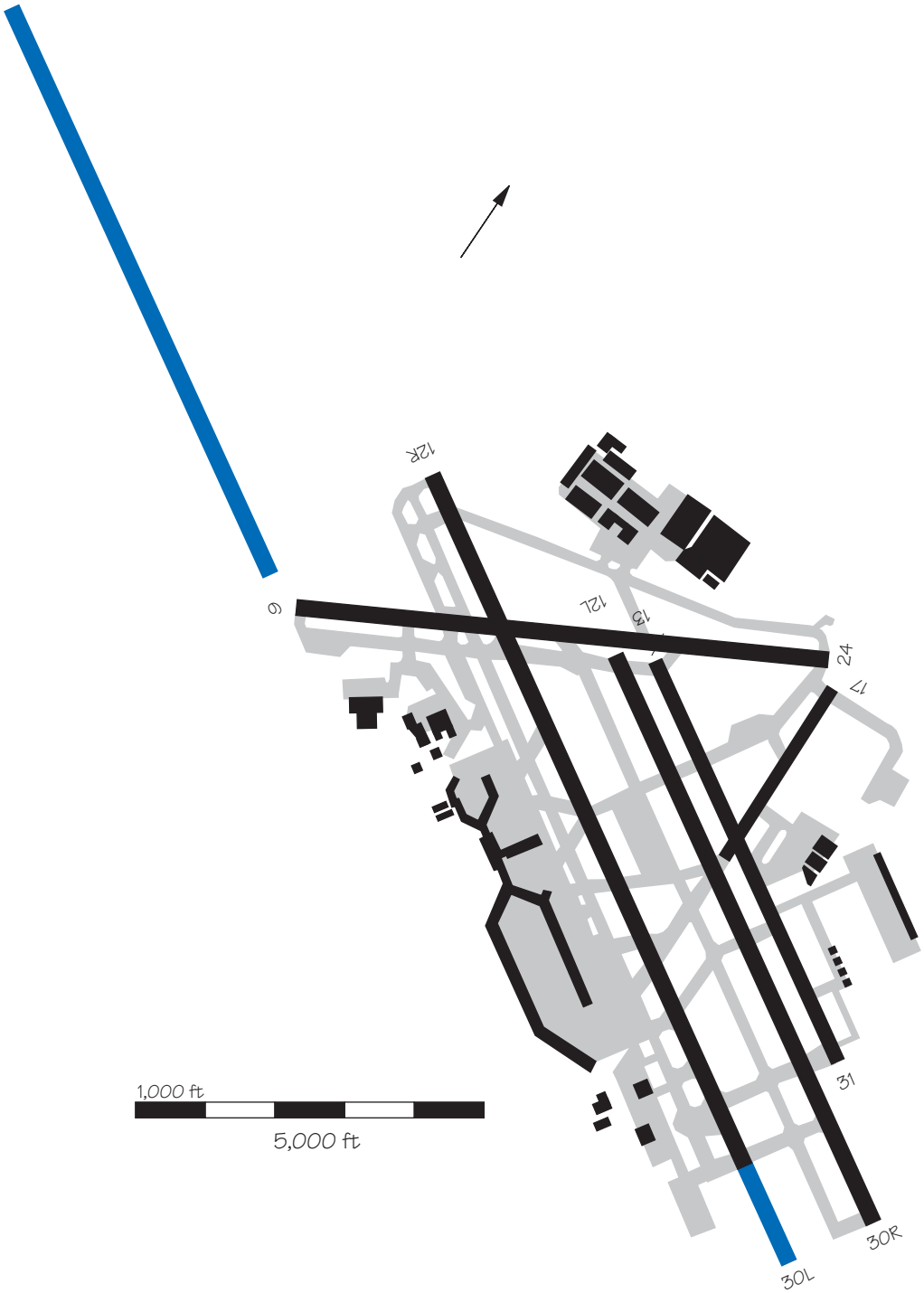
SRQ — Sarasota Bradenton Airport

A new parallel Runway 14L/32R 1,230 ft. northwest of Runway 14/32 is being planned at an estimated cost of $10 million. It is expected to be operational beyond 2002. IFR arrivals and departures on the new runway will be dependent on Runway 14/32 operations. In addition, an extension of the existing Runway 14/32 is planned at a cost of $5.1 million. It is expected to be operational beyond 2002. The runway extension will allow departures by larger and heavier aircraft and by aircraft with longer haul-lengths.



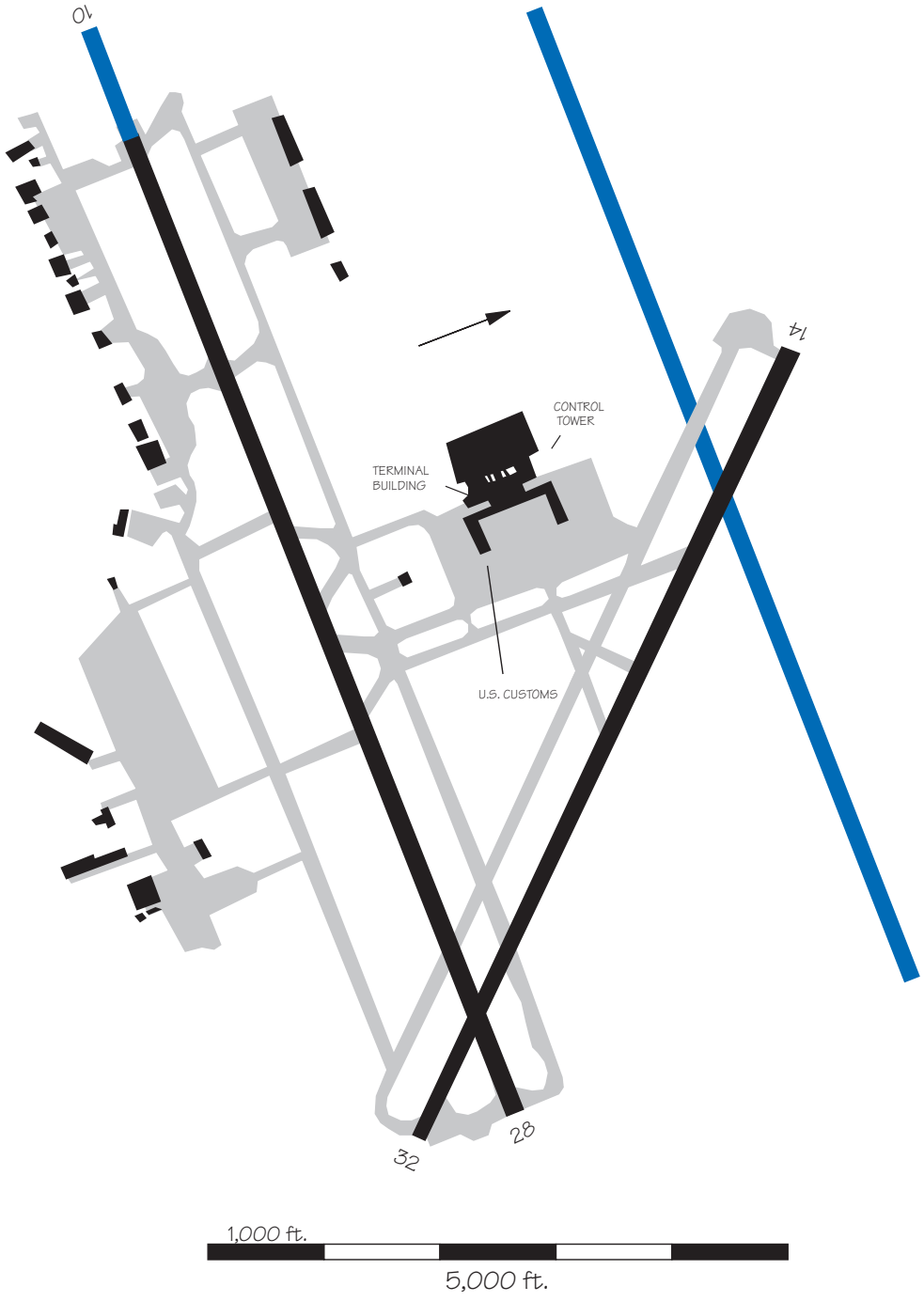
STL — Lambert St. Louis International Airport

A new parallel Runway 12R/30L has been recommended in the St. Louis Airport Master Plan Update. The Plan calls for a parallel runway supporting independent IFR arrivals. The Final Environmental Impact Statement (FEIS) was completed in December 1997, and construction could begin in 1998. Estimated completion date is 2003.



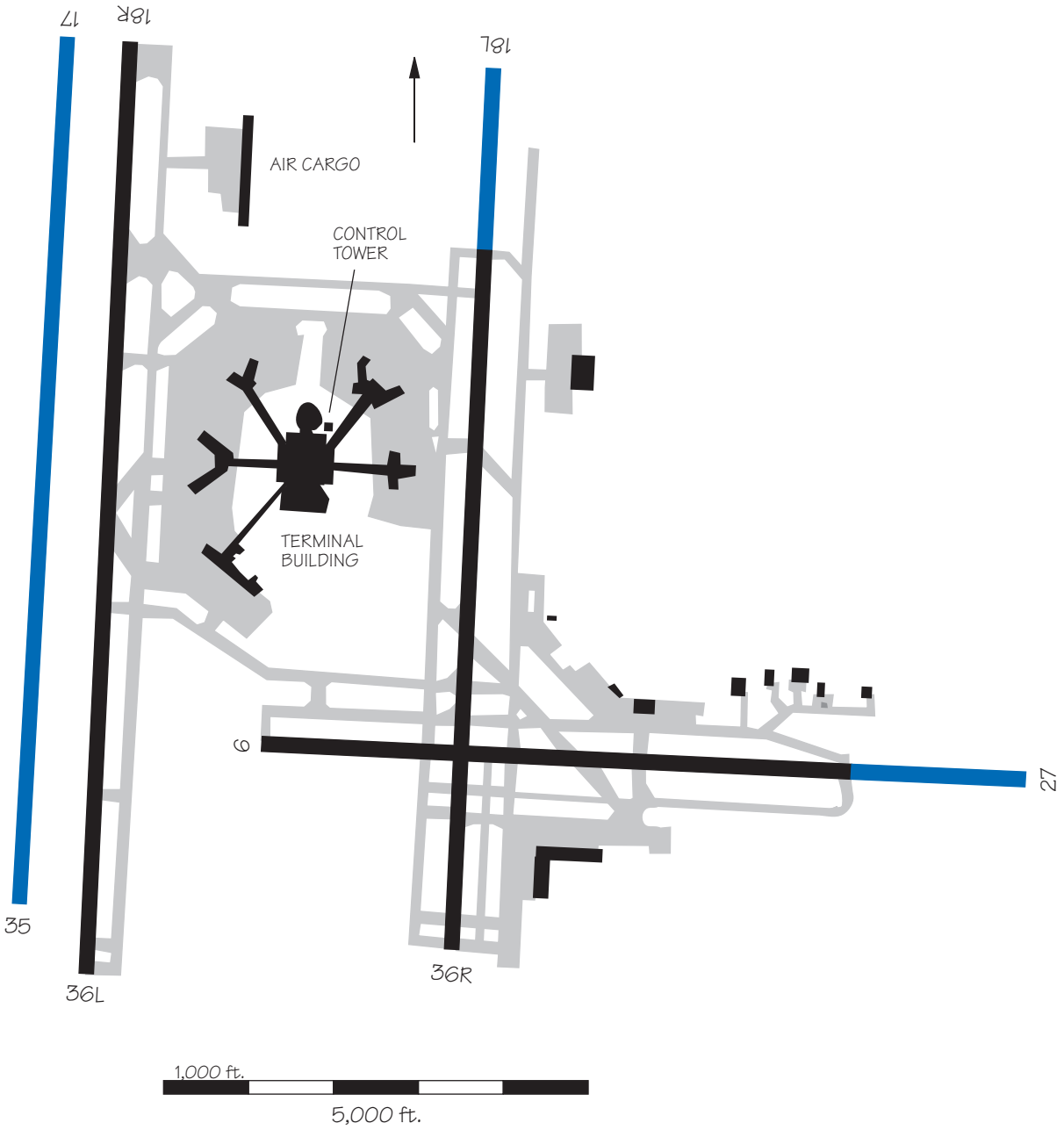
SYR — Syracuse Hancock International Airport

A new parallel Runway 10L/28R, 9,000 ft. long and separated from the existing Runway 10/28 by 3,400 ft. is being considered. It would provide independent parallel IFR operations, doubling hourly IFR arrival capacity. The cost of construction is estimated to be $55 million for the first phase of the new runway, which would be 7,500 ft. long, including a parallel taxiway and connections to the ramp. The final length of the runway would be 9,000 ft. A capacity analysis and needs study is presently underway. Runway 10R/28L is planned to be extended 2,000 ft. to an ultimate length of 11,000 ft.



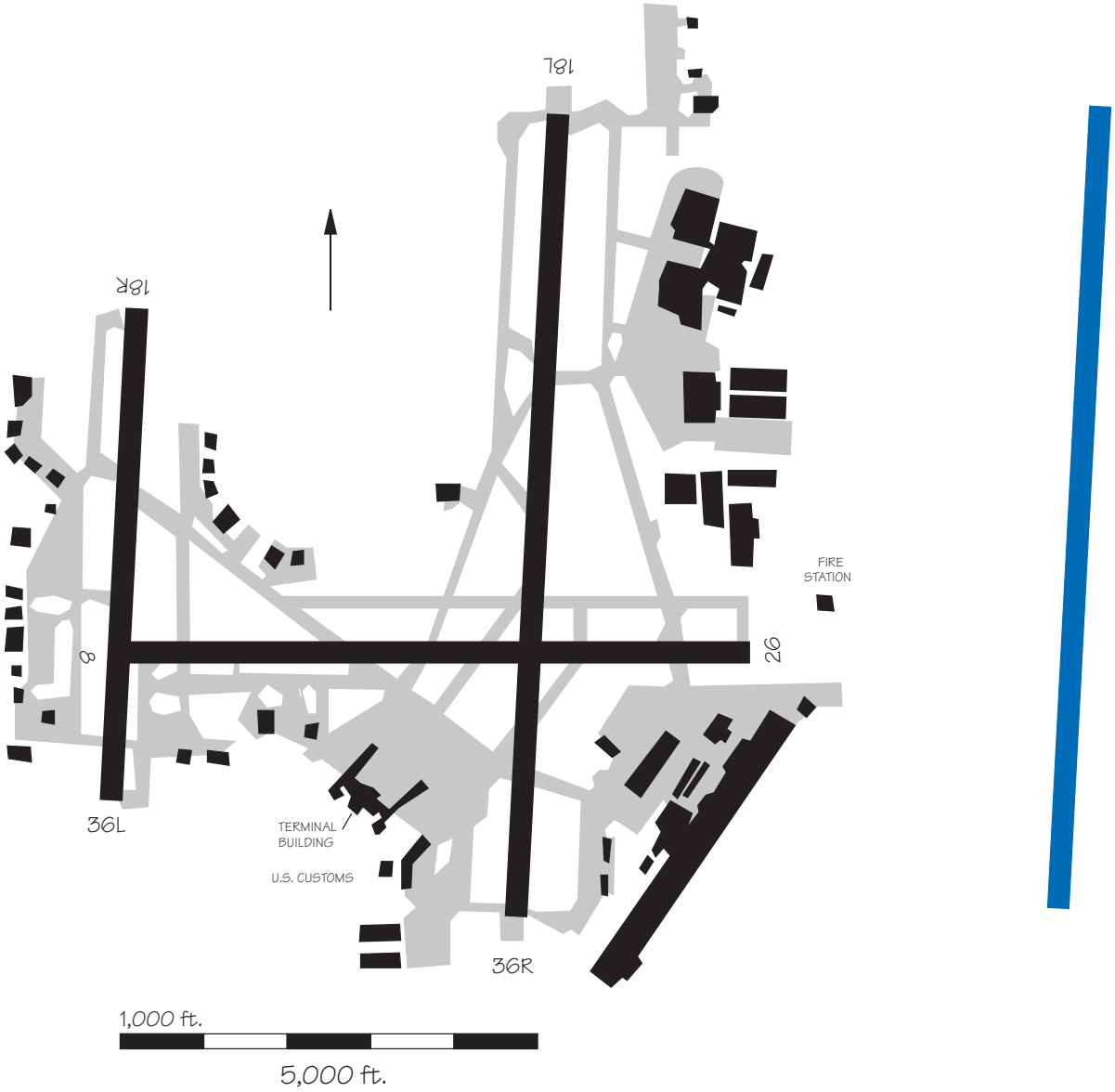
TPA — Tampa International Airport

A third parallel Runway, 17/35, 10,200 ft. long and 700 ft. west of Runway 18R/36L, is being considered. The new runway would primarily be used for arrivals with the existing Runway 18R/36L being used for departures. A 2,200 ft. extension of Runway 18L/36R is also being considered for the time frame beyond 2005. The Runway 36R threshold would be relocated 2,600 ft. north. This may allow for less restricted use of the runway by reducing noise impacts on communities south of the airport. Finally, reconstruction and a 1,200 ft. extension of Runway 9/27 is being considered for the time frame beyond 2010. The extended runway would be used for arrivals and departures. Arrivals may be able to land-and-hold-short of Runway 18L, therefore, the extended runway may allow dependent converging approaches to Runways 36L and 27.



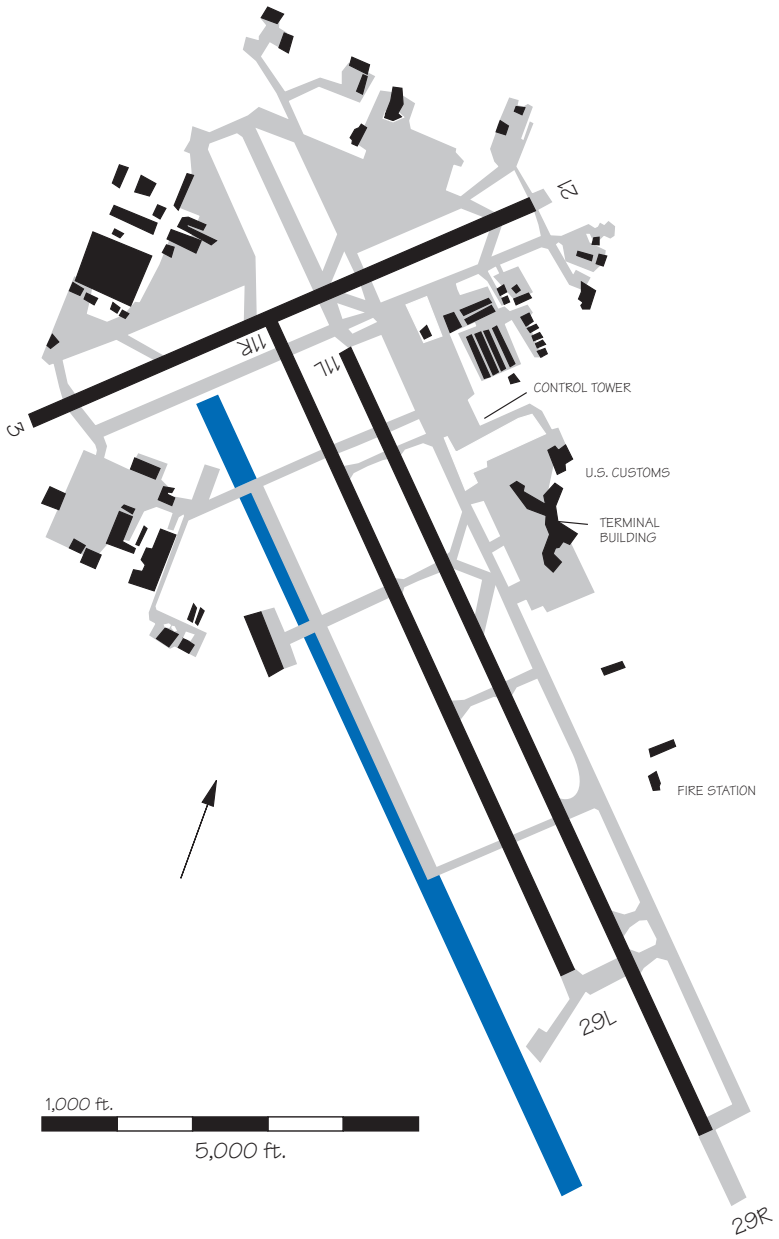
TUL — Tulsa International Airport

A new parallel runway, Runway 18L/36R, located 6,400 ft. east of the present 18L/36R and 9,600 ft. long, is being considered. The new runway would permit IFR triple independent approaches, if approved, to Runways 18L, 18C, and 18R.



TUS — Tucson International Airport

An additional parallel air carrier runway, Runway 11R/29L, has been proposed. Upon completion of the new runway, the current Runway 11R/29L, a general aviation runway, will revert to its original taxiway status. Current plans call for construction to start in 2003 to be operational in 2005. The cost of construction is estimated to be $30 million.



TYS — Knoxville McGhee-Tyson Airport